FURUNO®

Installation Manual
DSC/WATCH RECEIVER
DSC-60

SAFETY INSTRUCTIONS i
SYSTEM CONFIGURATION ii
EQUIPMENT LISTS iii

1. MOUNTING 1
1.1 Main Unit 1
1.2 Antenna (option) 3
1.3 External Loudspeaker 5
1.4 Handset Hanger (option) 5
1.5 AC-DC Power Supply Unit (option) 5
1.6 Printer PP-510 (option) 6
1.7 Distress Alert Unit IC-302-DSC/Incoming Indicator IC-303-DSC 6

2. WIRING 7
2.1 Wiring 7
2.2 Connection of AC-DC Power Supply Unit PR-300 (option) 11

3. INITIAL SETTINGS 13
3.1 System Setup 13
3.2 Setting of DIP Switches 17
3.3 Preamp Setting 20

4. RX BOARD (OPTION) 21

PACKING LISTS A-1
OUTLINE DRAWINGS D-1
SCHEMATIC DIAGRAMS S-1

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⚠ SAFETY INSTRUCTIONS

⚠ WARNING



Do not work inside the equipment unless totally familiar with electrical circuits.

Hazardous voltage which can shock exists inside the equipment.



Turn off the power at the mains switchboard before beginning the installation. Post a sign near the switch to indicate it should not be turned on while the equipment is being installed.

Fire, electrical shock or serious injury can result if the power is left on or is applied while the equipment is being installed.

⚠ CAUTION

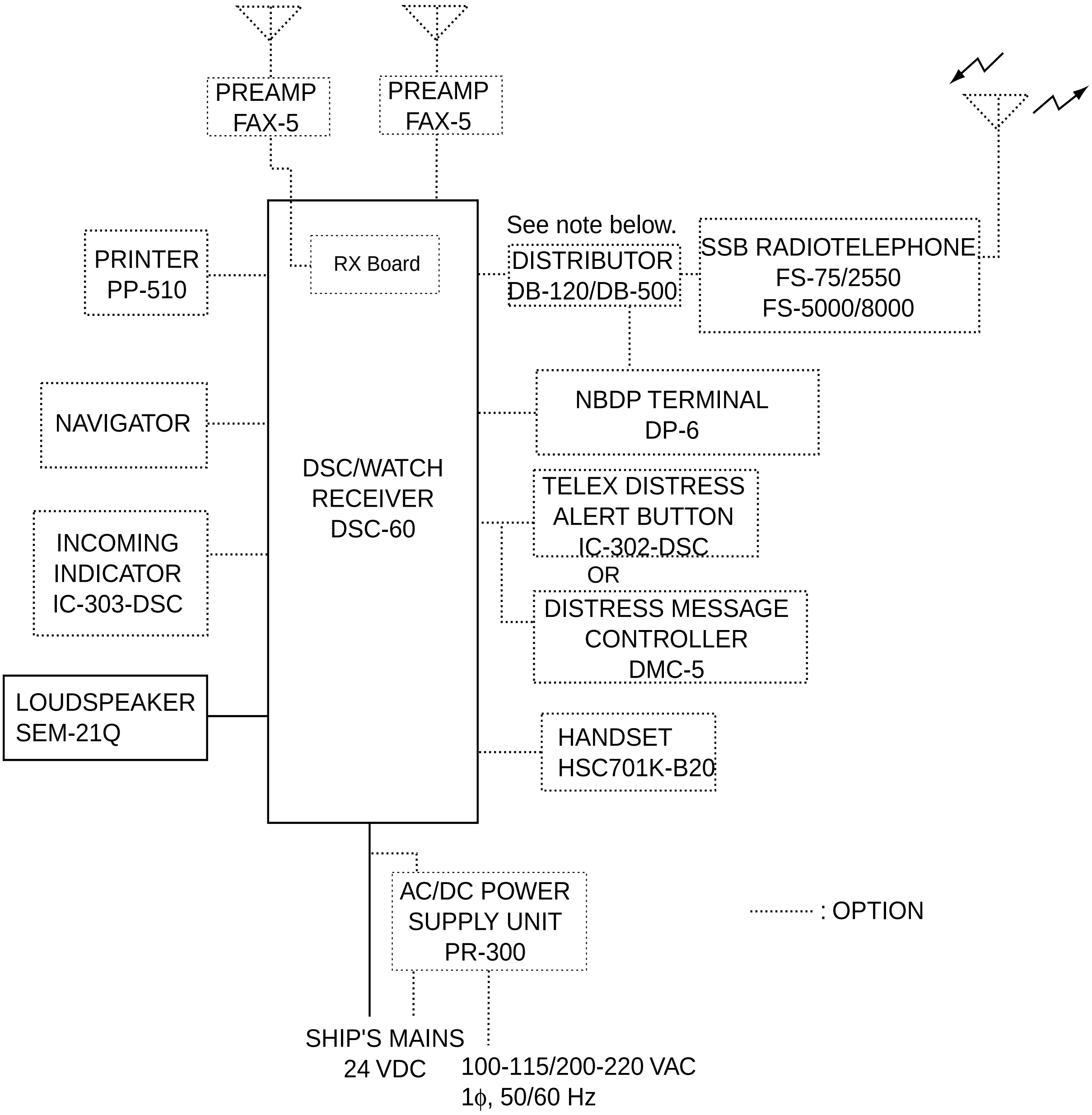
Confirm that the power supply voltage is compatible with the voltage rating of the equipment.

Connection to the wrong power supply can cause fire or equipment damage. The voltage rating appears on the label at the rear of the display unit.

Keep the following compass safe distances.

	Standard compass	Steering compass
Display Unit	0.3 m	0.2 m
AC-DC Power Supply Unit	0.9 m	0.7 m
Printer	1.0 m	0.8 m
IC-302/303	0.8 m	0.6 m
External Loudspeaker	2.2 m	1.5 m

SYSTEM CONFIGURATION



Note: DISTRIBUTOR DB-120/DB-500 not necessary
when using FS-5000 series radiotelephone.

EQUIPMENT LISTS

Standard Supply

Name	Type	Code no.	Qty	Remarks
Main Unit	DSC-60	-	1	
Installation Materials	CP05-07901	005-950-180	1 set	
Accessories	FP05-05200	000-055-407	1 set	FP05-05201, FP05-05202, Loudspeaker

Optional Equipment

Name	Type	Code no.	Qty	Remarks
RX Board Kit	OP05-91	005-950-340	1 set	05P0703 board
	OP05-93	005-950-610		05P0703 board, w/shield cases
AC-DC Power Supply Unit	PR-300	000-130-431	1	
Printer	PP-510	-	1 set	w/installation materials (CP16-01200), accessories (FP16-00100)
Distress Message Controller	DMC-5	-		
Distress Alert Unit	IC-302-DSC	-	1 set	w/Installation materials
Incoming Indicator	IC-303-DSC	-	1 set	w/Installation materials
Whip Antenna	04S4176	000-112-845	1	2.6 meter
Preamp Unit	FAX-5	000-075-016	1 set	
Cable Assy	05S0784*1m*	000-123-582	1	For SSB radiotelephone, w/D-sub connectors
	05S0784*3m*	000-123-583		
	05S0784*5m*	000-123-584		
Extension Cable Kit	OP04-2*10m*	000-041-174	1	For extension of FAX-5 cable
	OP04-2*20m*	000-041-175		
	OP04-2*30m*	000-041-176		
	OP04-2*40m*	000-041-177		
	OP04-2*50m*	000-041-178		
Twisted-pair Cable	CO-SPEVV-SB-C 0.2X2P*5m*	000-111-680	1	For navigator, DMC-5
	CO-SPEVV-SB-C 0.2X2P*10m*	000-120-792		
	CO-SPEVV-SB-C 0.2X2P*15m*	000-120-793		
	CO-SPEVV-SB-C 0.2X2P*20m*	000-120-794		
	CO-SPEVV-SB-C 0.2X2P*30m*	000-120-214		
	CO-SPEVV-SB-C 0.2X5P*5m*	000-560-451	1	For distress alert unit/ received call unit
	CO-SPEVV-SB-C 0.2X5P *10m*	000-560-452		
	CO-SPEVV-SB-C 0.2X5P *15m*	000-139-427		
	CO-SPEVV-SB-C 0.2X5P *20m*	000-103-868		
	CO-SPEVV-SB-C 0.2X5P *30m*	000-103-869		
Handset/bracket	HSC701K-B20	000-138-000	1 set	

1. MOUNTING

1.1 Main Unit

1.1.1 General

The DSC-60 can be mounted on the overhead, on a tabletop, on a bulkhead, or flush mounted in a panel. Mount the unit where it can be easily viewed and operated. When selecting a mounting location, keep in mind the following considerations, in addition to those already mentioned.

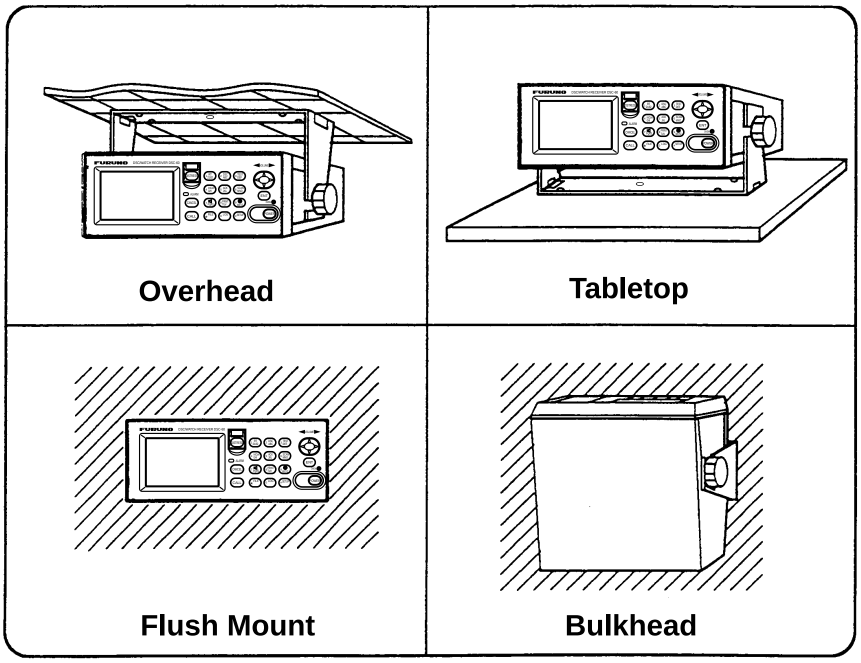
- Locate the unit away from water splash and rain.
- The temperature and humidity of the location should be stable and moderate.
- Keep the unit away from exhaust gas and heating and cooling vents.
- Select a well ventilated location.
- Select a location where shock and vibration are minimal.

1.1.2 Compass safe distance

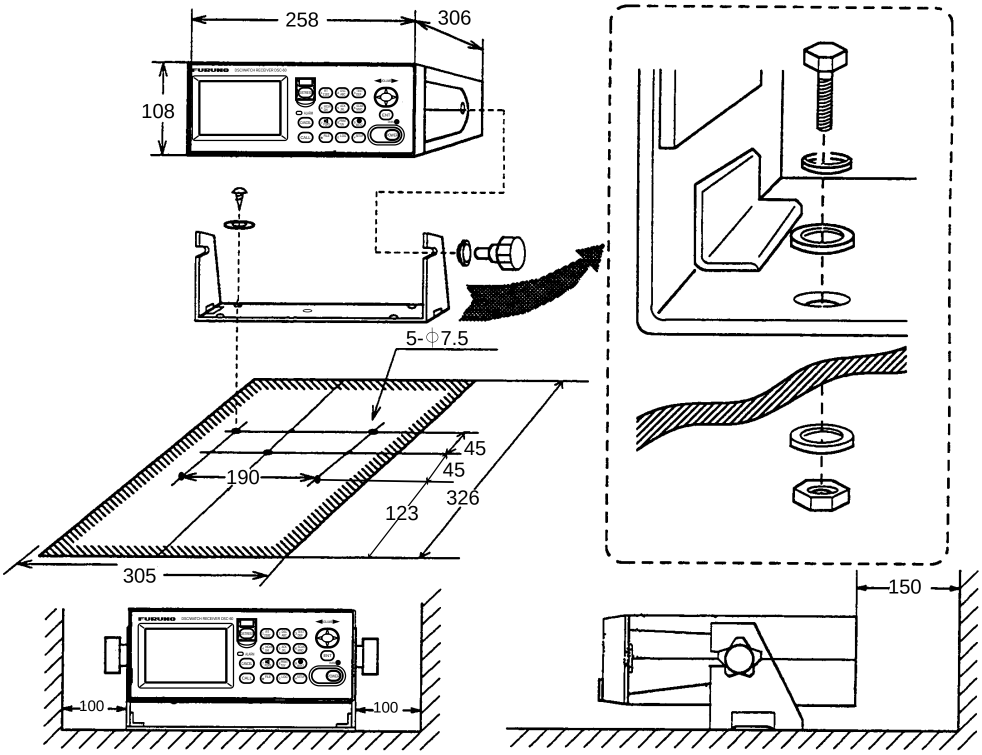
A magnetic compass will be affected if placed too close to the main unit. Keep the following compass safe distances in mind when selecting a mounting location.

Standard compass: 0.3 meters

Steering compass: 0.2 meters



1.1.3 Mounting

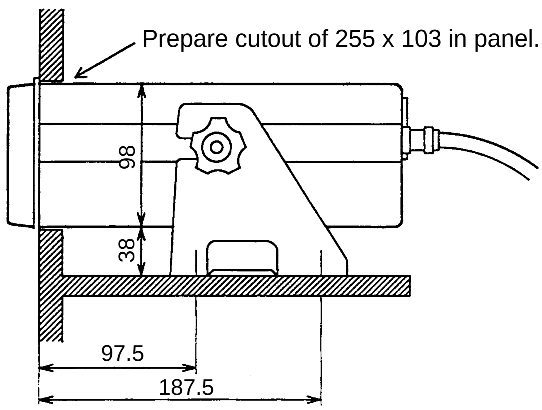


Notes

- All dimensions in millimeters.
- For added support fasten unit to mounting location with nuts, bolts and washers instead of tapping screws.
- Leave sufficient space at sides and rear of the unit for maintenance and service purposes. The minimum recommended space appears in the figure above.

1.1.4 Flush Mounting

The hanger is mounted with the unit when the unit is flush mounted. Be sure the mounting location is strong enough to support the weight of the unit.



1.2 Antenna (option)

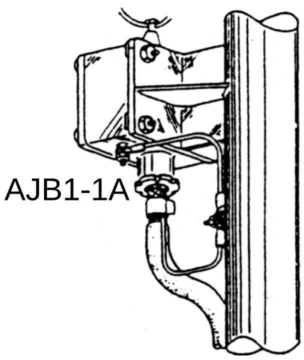
Performance of this unit is directly related to the antenna installation. In general, the antenna should be installed as high as possible on the boat, free from the influence of nearby antennas, rigging and masts.

The antenna commonly used for the DSC-60 is a 6 m whip antenna (local supply), long wire or optional whip of 2.6 m length with preamp unit (optional supply).

The antenna input on this unit is automatically protected against strong induction by a protective circuit. For better performance, however, we recommended use of the preamp unit FAX-5.

Antenna cable (option)

Connect the antenna to the unit with any 50 ohm coaxial cable (RG-10U/Y or equivalent).
Connect the center conductor of the coaxial cable using the junction box (type: AJB1-1A, code no.: 000-870-284, order from FURUNO).



Preamp unit (option)

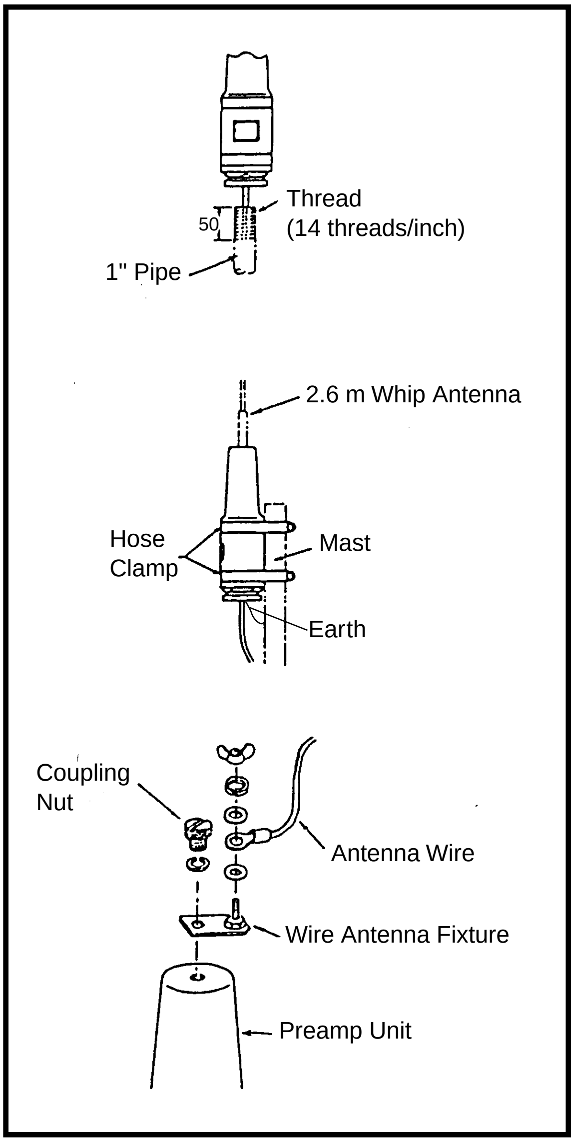
The body of the preamp unit can be mounted two ways;

1. The bottom of the preamp unit is designed to accept a threaded extension mast of 1 inch diameter. The pitch of the thread should be 14 threads per inch. To prevent undue flexing of the mast in heavy winds, the mast should not be longer than 5 feet (1.5 m).
2. The side of the preamp unit has a molded channel so that it may be mounted directly to a stub mast with two stainless steel hose clamps. Hose clamps must be arranged locally.

Screw the 2.6 m whip antenna tightly onto the preamp unit and waterproof the junction and other exposed metallic parts with sealing compound (silicone rubber, putty, etc.).

Note that a wire antenna of 2 to 3 meters length may be used instead of the whip antenna.

Note: The preamp unit requires about 9 VDC power. See page 20.


Thread
(14 threads/inch)
50
1" Pipe
2.6 m Whip Antenna
Hose
Clamp
Mast
Earth
Coupling
Nut
Antenna Wire
Wire Antenna Fixture
Preamp Unit

1.3 External Loudspeaker

The external loudspeaker sounds the alarm. It can be installed on a tabletop, the overhead or bulkhead. Fasten the loudspeaker to the mounting location with tapping screws, or nuts, bolts and washers. For mounting dimensions, see the outline drawing at the end of this manual.

1.4 Handset Hanger (option)

The mounting location should provide easy access to front panel controls while operating the handset. Also, the length of the standard handset cable is 100 cm, so locate the handset hanger within 100 cm of the unit.

1.5 AC-DC Power Supply Unit (option)

For Convention vessels, both AC and DC power must be fed to the DSC-60, via an AC-DC power supply unit. When AC input fails, DC power is supplied. FURUNO can supply the PR-300 AC-DC power supply unit.

1.5.1 Mounting considerations

When selecting a mounting location, keep in mind the following points.

- Select a location which provides adequate ventilation.
- The location must be clean and dry.
- The mounting location must be able to support the weight of the unit (14.5 kg) under the continued conditions of vibration normally encountered aboard the vessel. If necessary, reinforce the mounting location.
- The PR-300 will affect a magnetic compass if it is placed too near the compass. Observe the following compass safe distance to prevent deviation of a magnetic compass;

  Standard compass: 0.9 meters

  Steering compass: 0.7 meters

1.5.2 Mounting

Refer to outline drawing at the end of this manual.

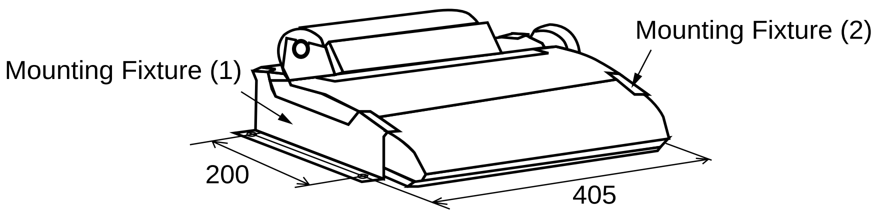
1.6 Printer PP-510 (option)

Install the unit with the two mounting fixtures (supplied). Refer to the outline drawing at the end of this manual. Connect the interconnection cable between the printer and the DSC-60.

For how to load paper and set ribbon cassette, refer to the Operator’s Manual of the printer.

Mounting

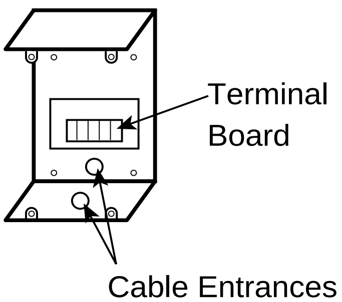
1. Select a flat surface. (Compass safe distance, Standard, 1.0 meters, Steering, 0.8 meters)
2. Fix the printer to the mounting location with two mounting fixture.



1.7 Distress Alert Unit IC-302-DSC, Incoming Indicator IC-303-DSC

Select the mounting location where the button on the unit can be operated easily in an emergency. See the back of the manual for mounting dimensions and recommended clearance space. (Compass safety distance: Standard, 0.8 m, Steering, 0.6 m)

1. Unfasten four screws to remove the cover.



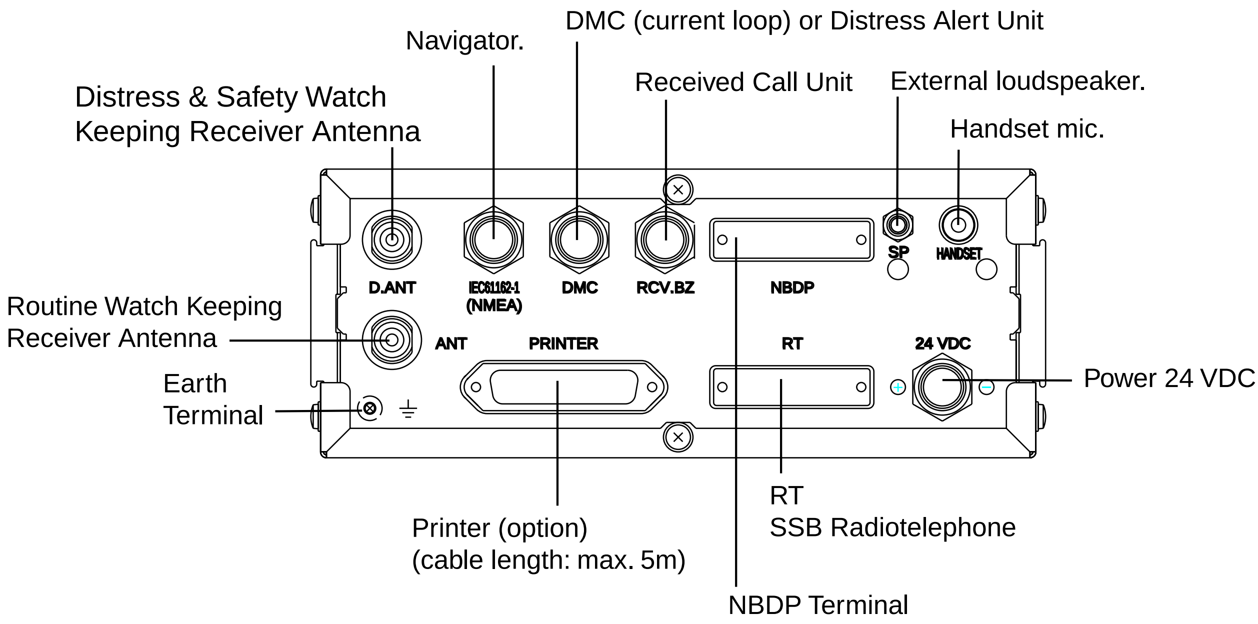
2. Fasten IC-302 with four tapping screws to remove the cover.
3. Pass the cable through appropriate entrance to connect to the terminal board.
   There are two cable entrances, one at the bottom and on the back. Select one.
4. Attach the cover with four screws.

2. WIRING

2.1 Wiring

2.1.1 Standard wiring

All external equipment are connected to appropriate connectors on the rear panel of the DSC-60. The figure below shows the location of these connectors. Note that all interconnection cables are optionally supplied. For further details, refer to the interconnection diagram at the end of this manual.



Power (24 VDC)

Attach the connector (supplied) to the power cable and plug it into the 24 VDC connector at the rear of the main unit. When connecting to the optional AC-DC power supply unit PR-300, supply AC power and DC power to the PR-300. See paragraph “2.2 Connection of AC-DC Power Supply Unit PR-300” for detail.

Ground (⏚)

Connect either a copper strap or 1.25 sq vinyl wire (local supply) between ship’s superstructure and ground terminal on the DSC-60.

Note: Ground the equipment to prevent mutual interference.

D.ANT (Distress & Safety Watch Keeping Receiver Antenna)

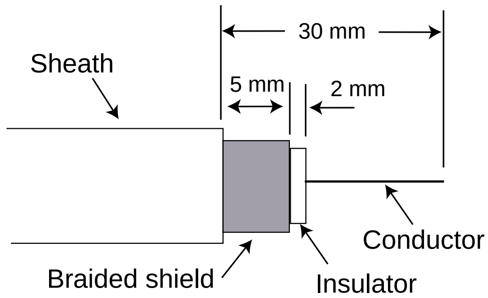
The DSC antenna is connected to the main unit with a 50 ohm coaxial cable, type RG-8/8U or equivalent. Attach an M-type plug (if necessary) to the cable as shown below. Screw the plug into the D. ANT connector at the rear of the main unit.

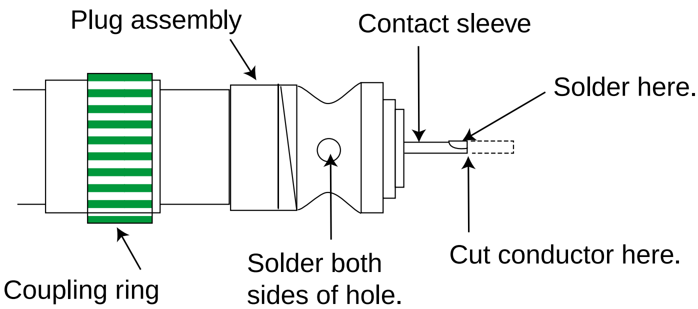
ANT (optional Rx Board kit is required)

The antenna is connected to the main unit with a 50 ohm coaxial cable, type RG-8/U or equivalent. Be sure to leave some slack in the cable for future service and maintenance.

Lay the coaxial cable and attach an M-type plug (if necessary) to the cable as follows.

1. Remove the sheath by 30 mm.
2. Bare 23 mm of the center conductor. Trim braided shield by 5 mm and tin.
3. Slide coupling ring onto cable.
4. Screw the plug assembly on the cable.
5. Solder plug assembly to braided shield through solder holes. Solder contact sleeve to conductor.
6. Screw coupling ring into plug assembly.
7. Screw the plug into the ANT connector at the rear of the main unit.





SP

Connects the loudspeaker MX910-X01 (supplied with the accessories) here.

2.1.2 External Equipment

IEC61162-1 (NMEA)

Connects a navigator here. The DSC-60 can receive the following sentences in IEC-61162-1 format. Use the FM14-5P connector (supplied) and interconnection cable type CO-SPEVV-SB-C 0.2x2P (option). For how to fabricate the cable, see the figure in below.

- GLL: Latitude and longitude
- RMC: Generic navigation information
- RMA: Loran C data (L/L, LOPs, etc.)
- GGA: GPA position, UTC
- ZDA: UTC, day, month, and year

Priority: GGA>RMC>RMA>GLL>ZDA Priority is kept for one minute.

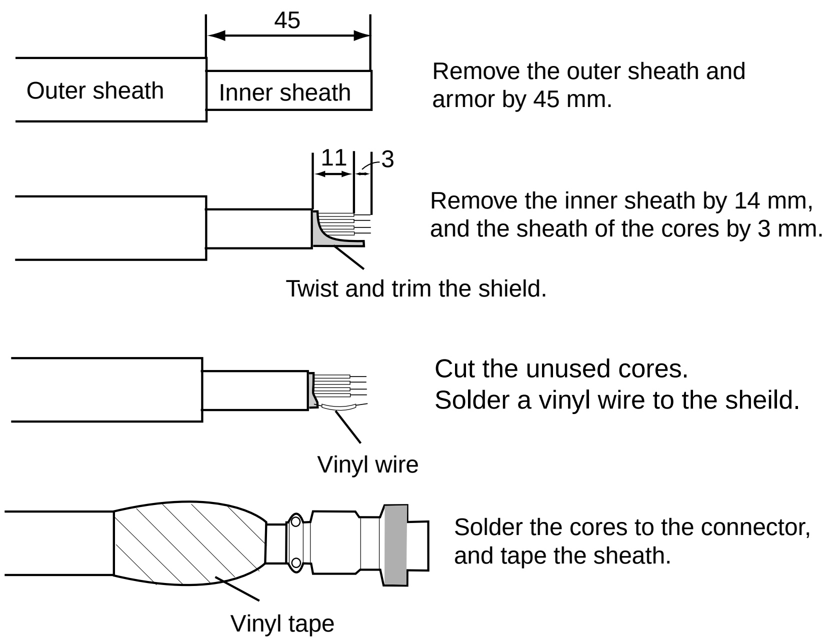
DMC

Connects the DMC Terminal DMC-5 or Distress Alert Unit IC-302 here using the appropriate cable and connector. For the fabrication, see the figure in below.

- DMC-5: CO-SPEVV-SB-0.2X2P cable (option) and FM14-6P connector (supplied).
- IC-302: CO-SPEVV-SB-0.2X5P cable (option) and FM14-6P connector (supplied)

RCV. BZ

Connects the indicator IC-303 here. Use the FM14-7P connector (supplied) and CO-SPEVV-SB-C 0.2X5P cable (option). For how to fabricate the cable, see the figure in below.



Fabrication of CO-SPEVV-SB-C for IEC61162-1, DMC and RCV. BZ terminals

PRINTER

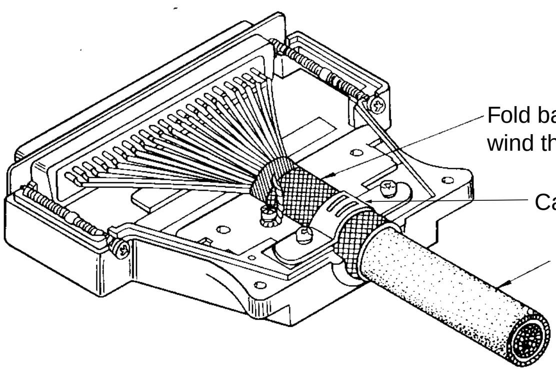
Connects the printer PP-510 (option).

HANDSET

Connects the HSC701K-B20 handset (option).

RT

Connects the SSB radiotelephone, by using the cable assembly 05S0784 (option).
For the cable assembly UL2464-SB(M) (local supply, with no connector), fabricate the connector 17JE-23250-02 (DSC, supplied as installation materials) as below.



Note: For this cable fabrication;

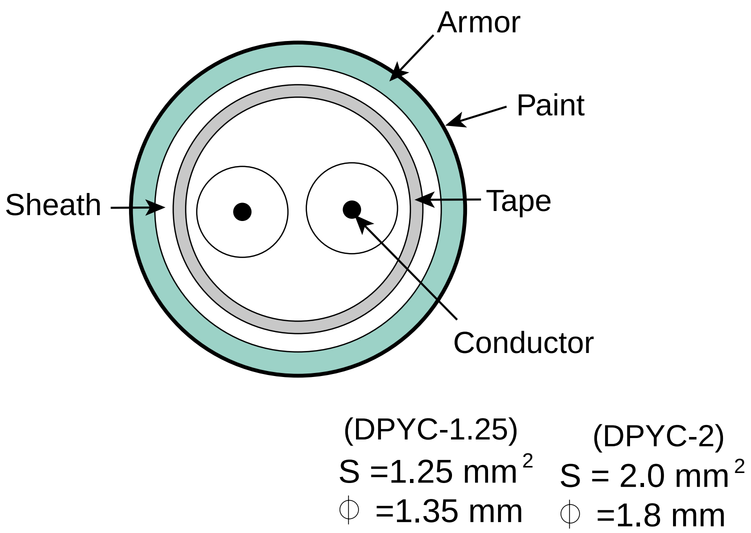
FS-1562/2550: Connector supplied as installation material is not used.

FS-5000 series: Cut one side of the cable, and connect to the terminal board in the equipment.

2.2 Connection of AC-DC Power Supply Unit PR-300 (option)

When connecting to an AC and DC ship's mains, the optional AC-DC power supply unit PR-300 is required. Attach the crimp-on lug FV5.5-S4 (local supply) to the power cable (local supply) for connection with the PR-300. Use the power cable as below.

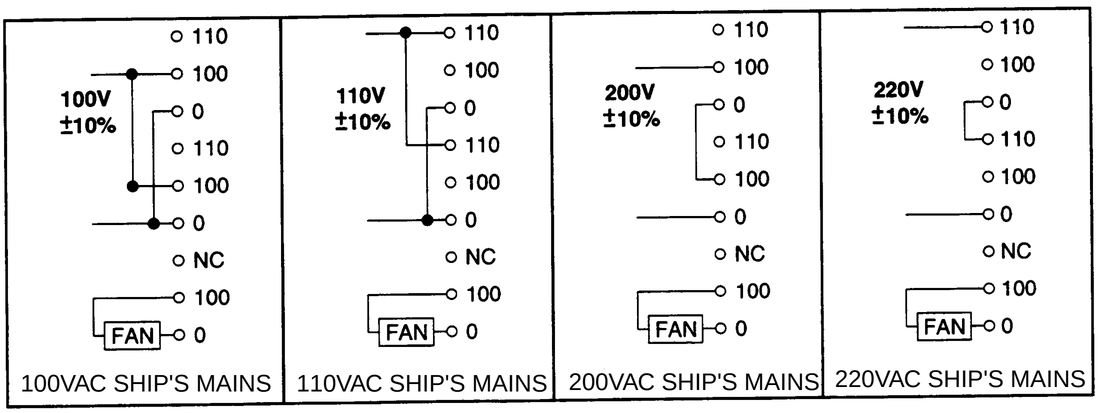
- For AC power: DPYC-1.25 (Japan Industrial Standard) or equivalent
- For DC power: DPYC-2.0 (Japan Industrial Standard) or equivalent



DPYC, sectional view

2.2.1 Changing tap connections

The transformer tap for input voltage has been st to 220 VAC (fuse 5A) at the factory.
If necessary, change the transformer taps setting according to ship's mains.

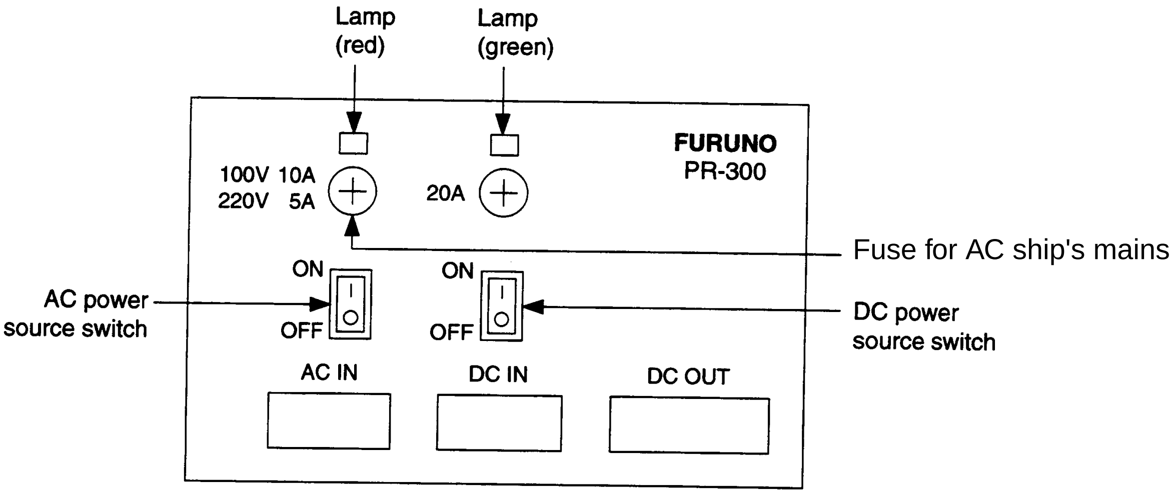


Tap connections in the PR-300

2.2.2 Changing the power fuse

Change the power fuse according to AC input voltage as follows.

AC ship's mains	Fuse
100/110 VAC	10 A
200/220 VAC	5 A



AC-DC power supply unit PR-300, rear view

2.2.3 Grounding

Connect a ground wire between ship's superstructure and a fixing screw on the PR-300.

⚠ CAUTION

Ground the equipment to prevent electrical shock and mutual interference.

3. INITIAL SETTING

When turning on the power for the first time, the following items should be set on the System setup or Alarm setup menus.

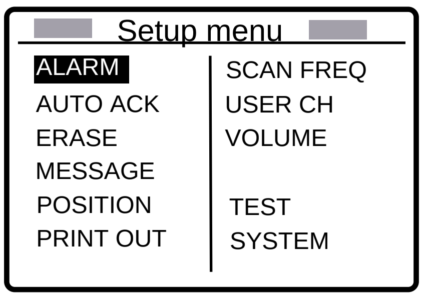
- Own ship's ID
- Watch receiver frequency band
- Line out level for DSC signal
- Transmission key timing
- Remote control protocol for RT (Radiotelephone) port
- Remote station function
- Remote control for NBDP port
- Detecting DSC signal strength

3.1 System Setup

The system setting is necessary after the installation. To prevent accidental transmission of the distress alert, remove the connector of SSB radiotelephone except when the sailing. This setting should be entered by a qualified technician. Under no circumstances shall the operator enter ship's ID.

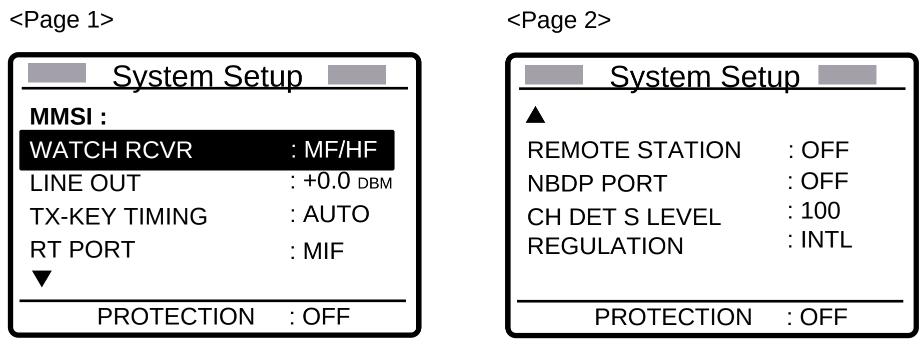
3.1.1 Opening the System Setup menu

1. Press [SETUP] key to display the Setup menu.



Setup menu

2. Select "SYSTEM" with the cursor pad.
3. Press the [ENT] key to display the System setup menu.
4. Enter a password referring to the FURUNO INFORMATION.

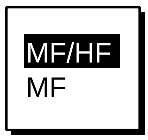


System setup menu

3.1.2 Watch receiver frequency band

Set the watch receiver as below.

1. Open the System setup menu.
2. Press ▲ or ▼ to select "WATCH RCVR".
3. Press the [ENT] key to display the WATCH RCVR pop-up window as below.



WATCH RCVR pop-up window

4. Press ▲ or ▼ to select "MF/HF" or "MF" as appropriate.

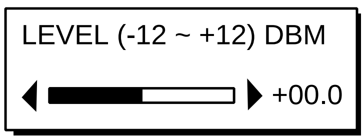
   MF/HF: Maximum six distress/safety frequencies are available.
   (A1, A2, A3 and A4 area)

   MF: Distress/safety frequency is 2187.5 kHz only (A1 and A2 area)
5. Press the [ENT] key.

3.1.3 Line out level for DSC signal setting

Set line out level. For FURUNO SSB (600 Ω), set <u>0 dBm</u>.

1. Open the System Setup menu.
2. Press ▲ or ▼ to select "LINE OUT".
3. Press the [ENT] key to display the pop-up window for adjustment of line out level.



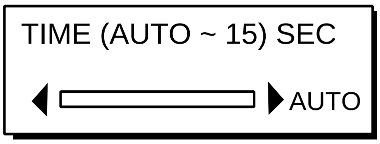
LINE OUT LEVEL pop-up window

4. Press ◀ or ▶ to adjust the indicator bar (1.5 dBm step).
5. Press the [ENT] key.

3.1.4 Transmission key timing setting

Select transmission timing, that is, the delay time in seconds to allow for tuning of transmitter before message is transmitted. (When connecting to other makes of SSB, set according to specifications of equipment.)

1. Open the System setup menu.
2. Press ▲ or ▼ to select “TX-KEY TIMING”.
3. Press the [ENT] key to display the pop-up menu for adjustment of transmission timing.



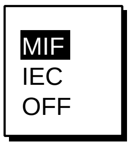
TX-KEY TIMING pop-up window

4. Press ◀ or ▶ to adjust the indicator bar (AUTO, 0.1, 0.5, 1, 2, 3, 4, 5, 10, 15).
   FURUNO’s SSB: Set to AUTO (Timing is controlled by the MIF command <TU>.)
   Other makes of SSB: Set according to specifications of equipment.
5. Press the [ENT] key.

3.1.5 Remote control protocol for RT (Radiotelephone) Port

Select the protocol depending on the SSB radiotelephone connected.

1. Open the System setup menu.
2. Press ▲ or ▼ to select “RT PORT”.
3. Press the [ENT] key to display the RT PORT pop-up window.



4. Press ▲ or ▼ to select the appropriate setting.
   MIF: When connecting a FURUNO SSB radiotelephone (ex. FS-1562, FS-5000/8000).
   IEC: When connecting another maker’s SSB radiotelephone having IEC-61162-1 format.
   OFF: When connecting the radiotelephone having protocols except MIF/IEC, or not having remote control function.
5. Press the [ENT] key.

Note: When connecting with FS-1562/2550, set the system setting for remote operation on radiotelephone.

3.1.6 Remote station function

This equipment can function as a SSB radiotelephone remote station as following procedure.

1. Open the System setup menu.
2. Press ▲ or ▼ to select “REMOTE STATION”.
3. Press the [ENT] key to display the REMOTE STATION pop-up window.



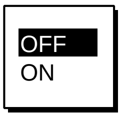
REMOTE STATION pop-up menu

4. Press ▲ or ▼ to select the appropriate setting.
   ON: Function as remote station. ([RT/2182] key is available.)
   OFF: Not function as remote station.
5. Press the [ENT] key.

3.1.7 Remote control for NBDP Port

Select ON or OFF depending on whether NBDP terminal is connected or not.

1. Open the System setup menu.
2. Press ▲ or ▼ to select “NBDP PORT”.
3. Press the [ENT] key to display the NBDP PORT pop-up window.



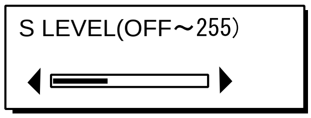
NBDP PORT pop-up window

4. Press ▲ or ▼ to select the appropriate setting.
   OFF: Connecting with other maker’s NBDP or no NBDP.
   ON: FURUNO’s NBDP (ex. DP-6).
4. Press the [ENT] key.

3.1.8 DSC signal strength

CH DET S LEVEL judges whether the DSC frequency to use to send a DSC message (Routine and Business only) is in use or not. The DSC message is not transmitted when the signal strength on the DSC frequency is higher than that set here. When the DSC frequency becomes clear, the DSC message is automatically transmitted. The setting range is OFF - 250 and the default setting is 100.

1. Open the System setup menu.
2. Press ▲ or ▼ to select "CH DET S LEVEL".
3. Press the [ENT] key to display the CH DET S LEVEL pop-up window.



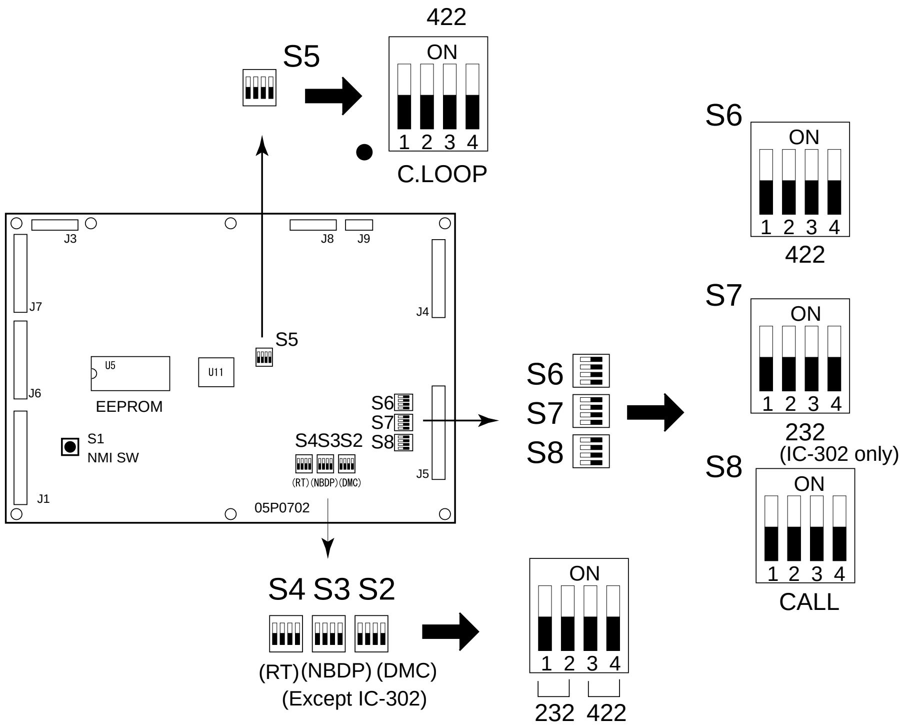
CH DET S LEVEL pop-up window

4. Press ◀ or ▶ to adjust the indicator bar. Too low a setting stops transmission of a DSC message because it detects noise on the DSC frequency. Alternately, too high a setting transmits the DSC message though low signal level is present on the DSC frequency used.
5. Press the [ENT] key.

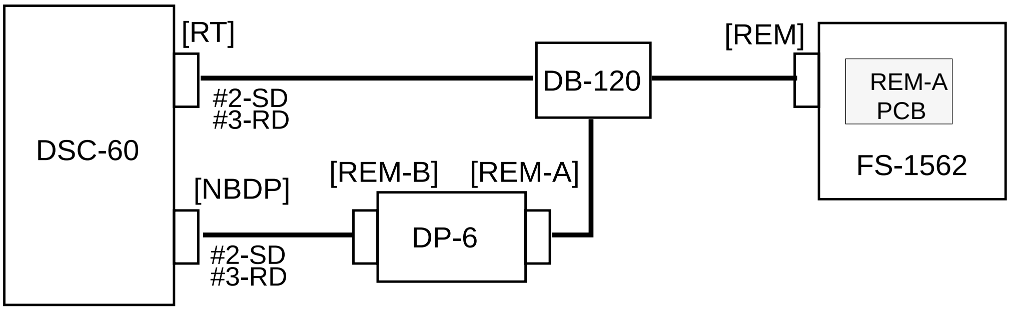
3.2 Setting of DIP Switches

When the following equipment are connected, set the DIP switches in the main unit to select Current Loop, RS-232C or RS-422.

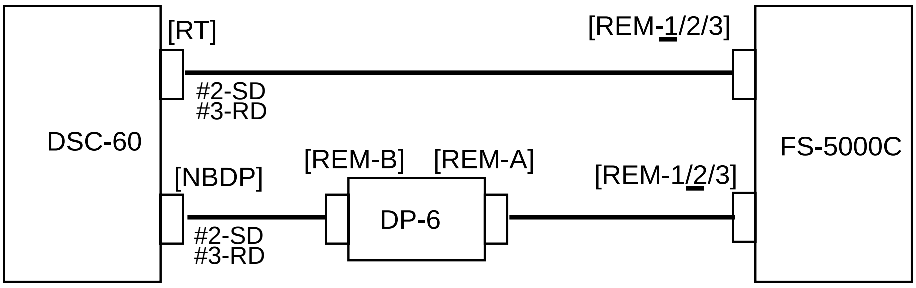
- SSB radiotelephone
- NBDP terminal
- DMC terminal
- Navigator



3.2.1 Setting for SSB radiotelephone and NBDP terminal connection



Connection with FS-1562 and DP-6, example



Connection with FS-5000 and DP-6, example

Tx/Rx control data of FURUNO's SSB radiotelephone is MIF protocol, RS-232C format.

For SSB radiotelephone (RT)

DIP switch S4			
#1	#2	#3	#4
ON	ON	OFF	OFF

(Setting for RS-232C setting)

For NBDP terminal

DIP switch S3			
#1	#2	#3	#4
ON	ON	OFF	OFF

(Setting for RS-232C)

Note 1: When not connecting to NBDP terminal, set 1 and 2 to ON, 3 and 4 to OFF of S3, select OFF at the NBDP on the system setting menu.

Note 2: When the distance between the DSC-60 and radiotelephone is 5 m or more use the current loop specification. To do this, set 1/2 and 3/4 of DIP switch S4 to OFF and ON, 2 of DIP switch S5 to C. Loop respectively. Also, set up the radiotelephone for current loop specification.

3.2.2 For other transceiver connection

When connecting to the transceiver which cannot be controlled by IEC-61162 format, select OFF at RT PORT on the setup menu.

When connecting to other maker's transceiver which is controlled by IEC-61162 format, set the DIP switches in the main unit.

For SSB radiotelephone (RT), TX data

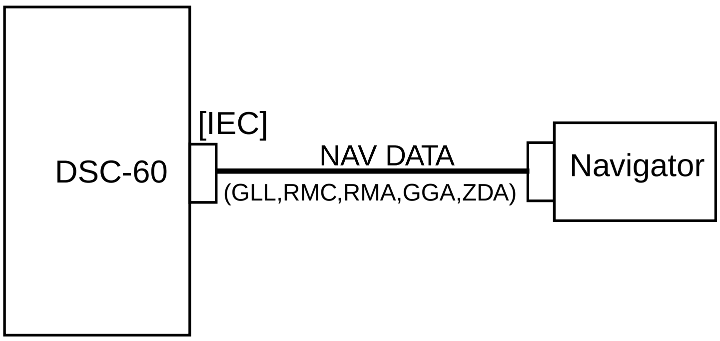
DIP switch S4			
#1	#2	#3	#4
OFF	OFF	ON	ON

(Setting for RS-422)

For SSB radiotelephone (RT), RX data

DIP switch S5	
#2 is ON	Setting for RS-422
#2 is OFF	Setting for Current Loop

3.2.3 For navigator connection



Navigator connection

Set the output data format from the navigator to IEC: RS-422 or Current Loop, and set S5 DIP switch in the main unit as below.

For IEC: RS-422

DIP switch S5	
#4	ON

For Current Loop

DIP switch S5	
#4	OFF

3.2.4 Connection to DMC-5, IC-302-DSC

The above equipment can be connected at DMC port at the back of the main unit. When connecting to them, set DIP switches as below.

DMC

Set to RS-422 as follows.

S2				S5	S6				S7				S8			
#1	#2	#3	#4	#3	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
OFF	OFF	ON	ON	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

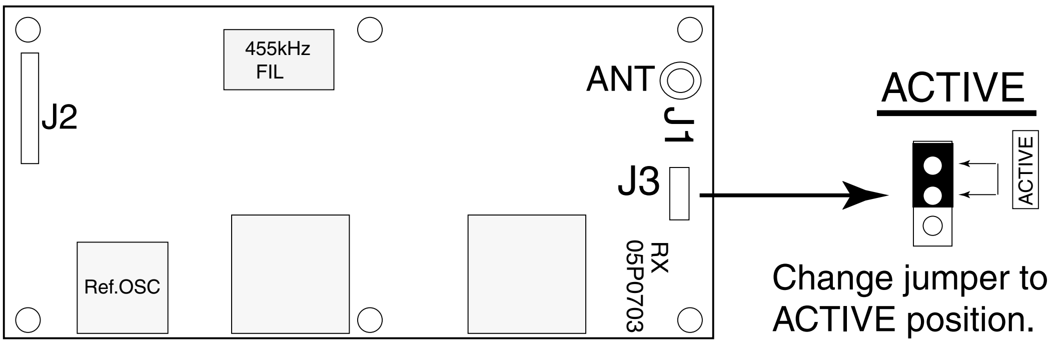
IC-302-DSC

Set to Current Loop for IC-302 connection.

S6	S7	S8
All	All	All
OFF	OFF	ON

3.3 Preamp Setting

When using the preamp for the watch receiver antenna, set J3 on the RX Board to ACTIVE.



4. RX BOARD (OPTION)

The RX Board 05P0703 (option) enables reception of routine DSC frequencies without the SSB radiotelephone connection. For complete modification, the whip antenna for routine DSC frequency is necessary.

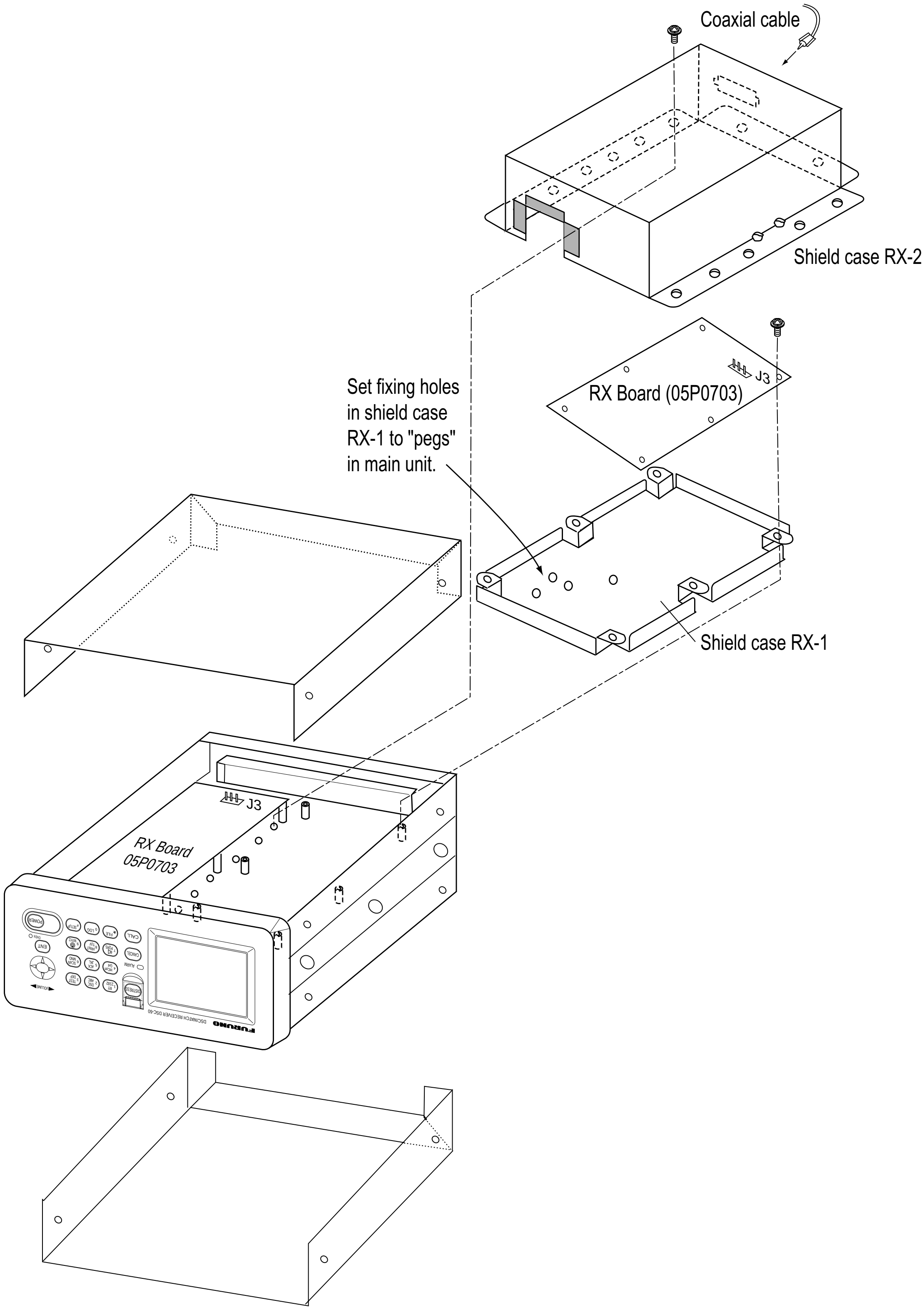
- Necessary Parts :RX Board Kit, Type :OP05-91, Code No. :005-950-340
  :RX Board Kit, Type:OP05-93, Code No. :005-950-610 (with shield case)

Name	Type	Code No.	Qty	Remarks
RX Board	05P0703	005-950-530	1	
Connector assembly	PH16DK-180	000-142-865	1	
Pan head screws	M3X8	000-881-404	6	
Shield case RX-1	05-085-1051	100-285-160	1	OP05-93 only
Shield case RX-2	05-085-1052	100-285-170	1	OP05-93 only
Pan head screws	M3X8	000-881-404	13	OP05-93 only

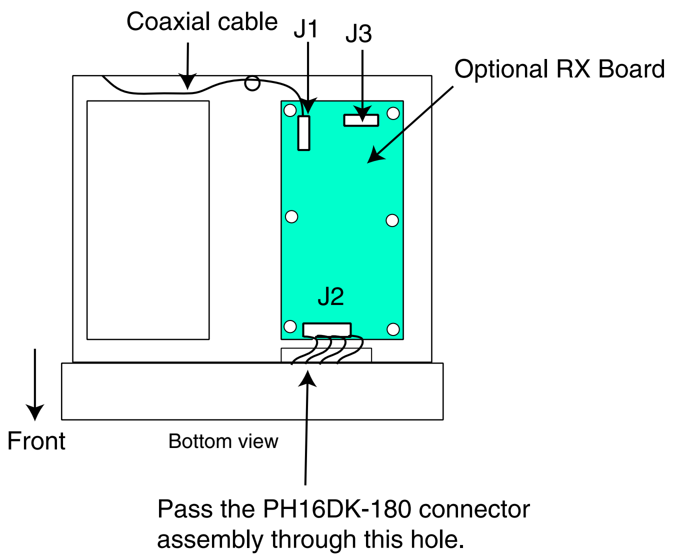
The unit functions normally without the shield case, however its use is recommended when noise might be a problem.

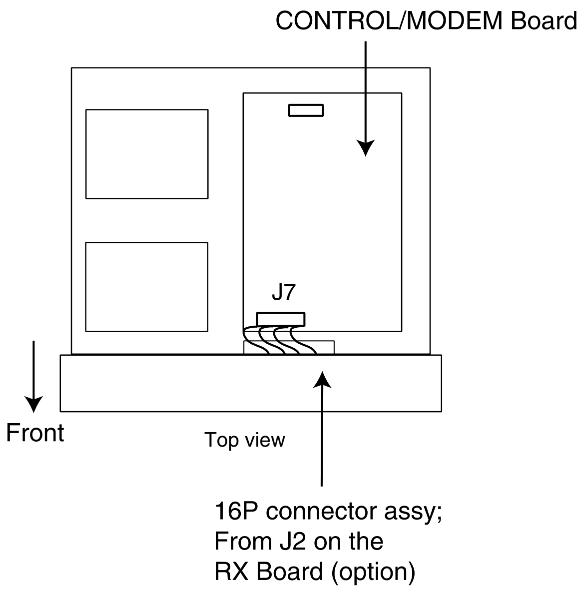
Mounting

1. Unfasten ten binding screws to remove the upper and lower covers from the main unit.
2. For mounting the OP05-93, remove RX Board for distress frequencies.
3. For mounting OP05-93, set the shield case RX-1 inside the main unit as shown below. Set fixing holes in shield case RX-1 to “pegs” in main unit.



4. Fasten the optional RX Board 05P0703 inside the main unit with six pan head screws (M3X8, supplied). For mounting OP05-93, fasten the RX Board with shield case RX-1 with six screws.
5. Attach the coaxial cable (from the rear panel) to J1 on the RX Board. For mounting OP05-93, attach the coaxial cable to J1 through the square bush of shield case RX-2.
6. Connect the PH16PDK-180 connector assembly (supplied) between J2 on the RX Board and J7 on the CONTROL/MODEM Board.





Note: When using the preamp unit (option), change jumper plug position on J3 to "ACTIVE" on the RX Board to supply power to the preamp unit. For detail, see "3.3 Preamp Setting" on page 20.

7. For mounting OP05-93, fasten the shield case RX-2 inside the main unit with thirteen pan head screws.
   Be careful not to pinch 16P connector assembly by the shield cover RX-2.
8. For mounting OP05-93, refasten the RX Board for distress frequencies with six pan head screws.
9. Reassemble the main unit.

A-1

FURUNO

CODE NO.	005-950-180	05DW-X-9401 -0
TYPE	CP05-07901	1/1

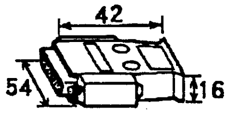
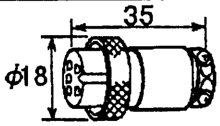
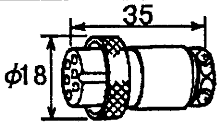
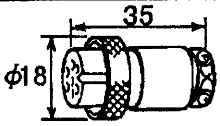
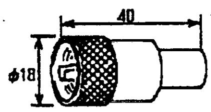
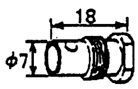
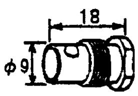
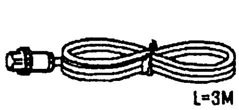
工事材料表

INSTALLATION MATERIALS

DSC-60

デジタル選択呼出/聴守受信装置

DSC/WATCH RECEIVER

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	コネクタ CONNECTOR	 	17JE-23250-02(D8C) CODE NO. 000-120-946	2	
2	コネクタ CONNECTOR	 	FM14-5P CODE NO. 000-111-537	1	
3	コネクタ CONNECTOR	 	FM14-6P CODE NO. 000-116-185	1	
4	コネクタ CONNECTOR	 	FM14-7P CODE NO. 000-113-345	1	
5	同軸プラグ COAX. PLUG	 	FM-MP-7 CODE NO. 000-108-859	1	
6	アダプタ REDUCER(S)	 	MP-M3A CODE NO. 000-108-860	1	
7	アダプタ REDUCER(L)	 	MP-M5A CODE NO. 000-108-861	1	
8	電源ケーブルＤＣ用 POWER CABLE (FOR DC MAINS)	 	VCTF0.75X2C *3M* CODE NO. 000-112-543	1	

DWG NO. C5628-M01- A

FURUNO ELECTRIC CO., LTD

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

A-2

FURUNO

CODE NO.	005-950-250	05DW-X-9501 -0
TYPE	FP05-05201	1/1

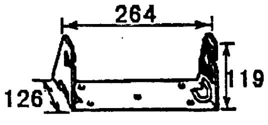
付属品表

ACCESSORIES

DSC-60

デジタル選択呼出/聴守受信装置

DSC/WATCH RECEIVER

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ハンガー組品 HANGER ASSY.		FP05-05201 CODE NO. 005-950-250	1	

DWG NO.
C5628-F01- A

FURUNO ELECTRIC CO ., LTD

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

A-3

FURUNO

CODE NO.	005-950-300	05DW-X-9502 -0
TYPE	FP05-05202	1/1

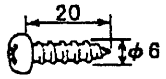
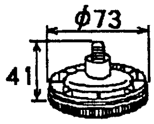
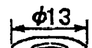
付属品表

ACCESSORIES

DSC-60

デジタル選択呼出/聴守受信装置

DSC/WATCH RECEIVER

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS		数量 Q'TY	用途／備考 REMARKS
1	+ナベタッピンソＩネジ +TAPPING SCREW		6X20 SUS304		5	
			CODE NO.	000-800-414		
2	ノブ組品 KNOB ASSY.		FP05-05003		2	
			CODE NO.	005-948-710		
3	ミガキ平座金 FLAT WASHER		M6 SUS304		5	
			CODE NO.	000-864-129		

DWG NO. C5628-F02- A

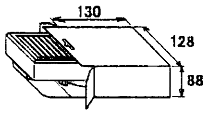
FURUNO ELECTRIC CO ., LTD

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

FURUNO

CODE NO.		05DW-X-9503 -1
TYPE		1/1

付属品表 ACCESSORIES	DSC-60 DK-22	

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ｽﾋﾟｰｶ LOUD SPEAKER		SEM-21Q CODE NO. 000-144-917	1	

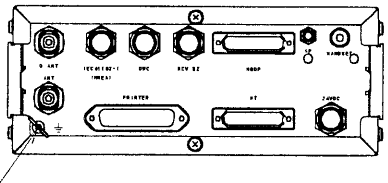
DWG NO. C5628-F03- B

FURUNO ELECTRIC CO., LTD.

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

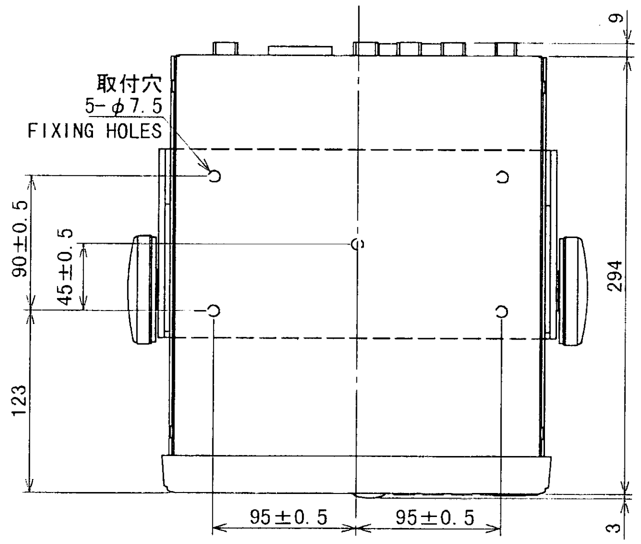
表 1 TABLE 1

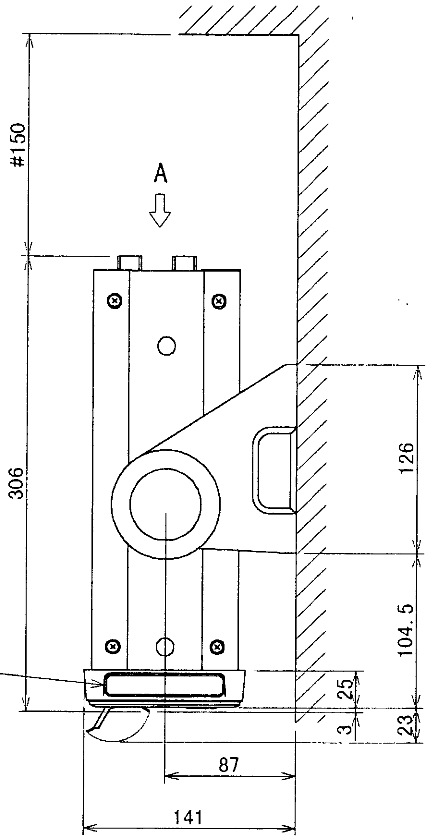
寸法範囲 (mm) DIMENSION	公差 (mm) TOLERANCE
０＜Ｌ≦５０	±1.5mm
５０＜Ｌ≦１００	±2.5mm
１００＜Ｌ≦５００	±3mm

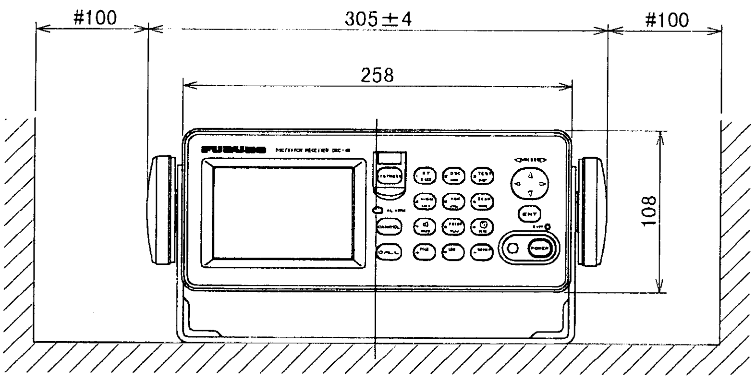


矢視Ａ（背面図）

VIEW A(REAR SIDE)







注 記 1）#印寸法は最小サービス空間寸法とする。

2）指定外の寸法公差は表１による。

3）取付用ネジはＭ６ボルトまたはコーチボルト呼び径５を使用のこと。

4）装備ケーブルはサービス時、指示部を前方に十分引き出せるよう余裕を持たせること。

NOTE

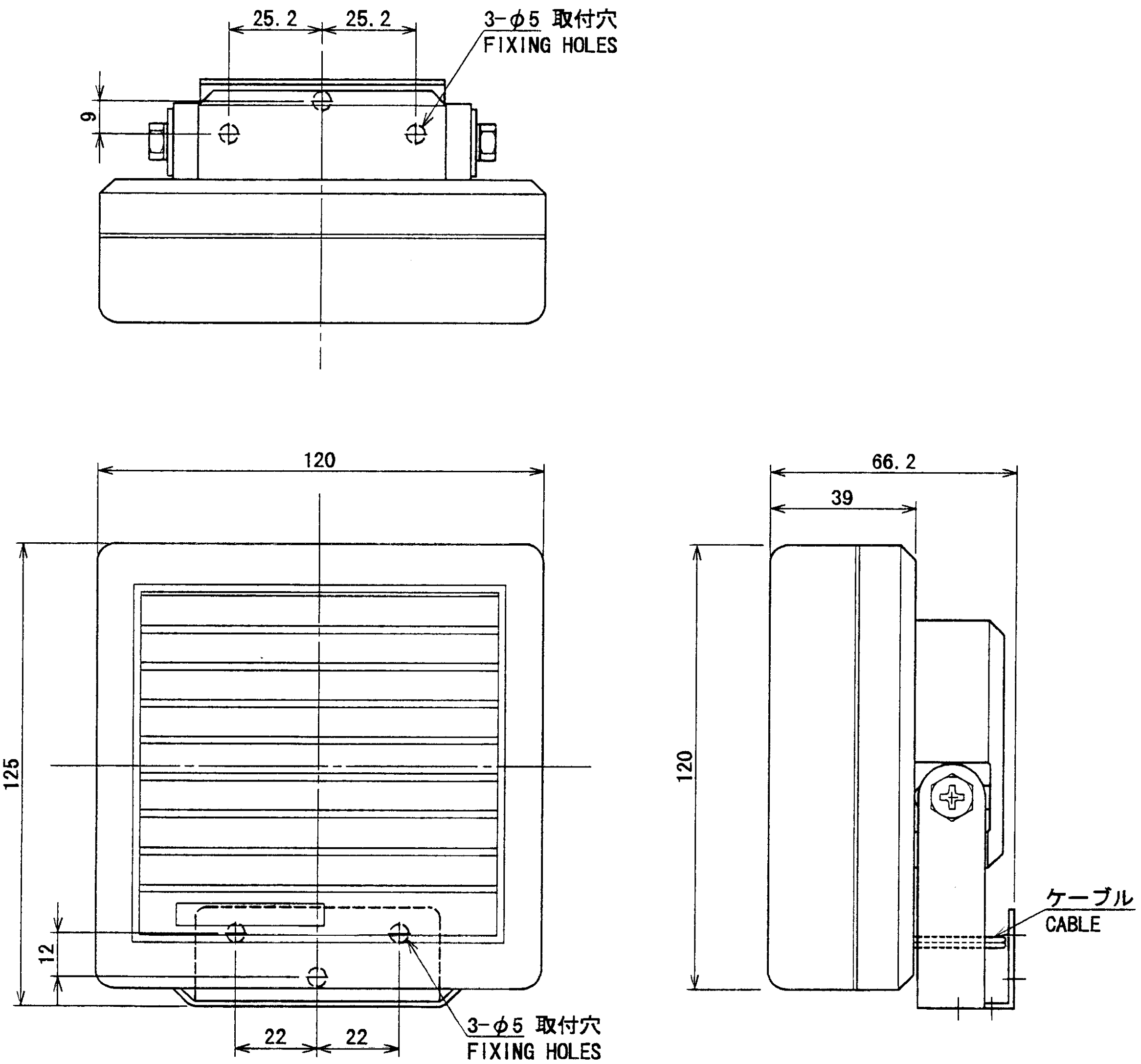
1. #: RECOMMENDED SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.
3. USE M6 BOLTS OR COACH SCREWS φ5 FOR FIXING UNIT.
4. KEEP ENOUGH CABLE LENGTH BEHIND UNIT.

DRAWN Dec 16 '99 T.YAMASAKI		TITLE DSC-60
CHECKED Dec 16 '99 K.Kusunoki		名称 指示部（卓上装備）
APPROVED Dec 16 '99 K.Kusunoki		外寸図
SCALE 1/5	MASS ±10% 4.7 kg	NAME DISPLAY UNIT(DESKTOP MOUNT)
DWG. No. C5628-G01- A	05-085-1100-G2	OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

表１　TABLE 1

寸法区分(mm) DIMENSION	公差(mm) TOLERANCE
0 ＜ L ≦ 50	±1.5
50 ＜ L ≦ 100	±2.5
100 ＜ L ≦ 500	±3



注記

１）指定なき寸法公差は表１による。

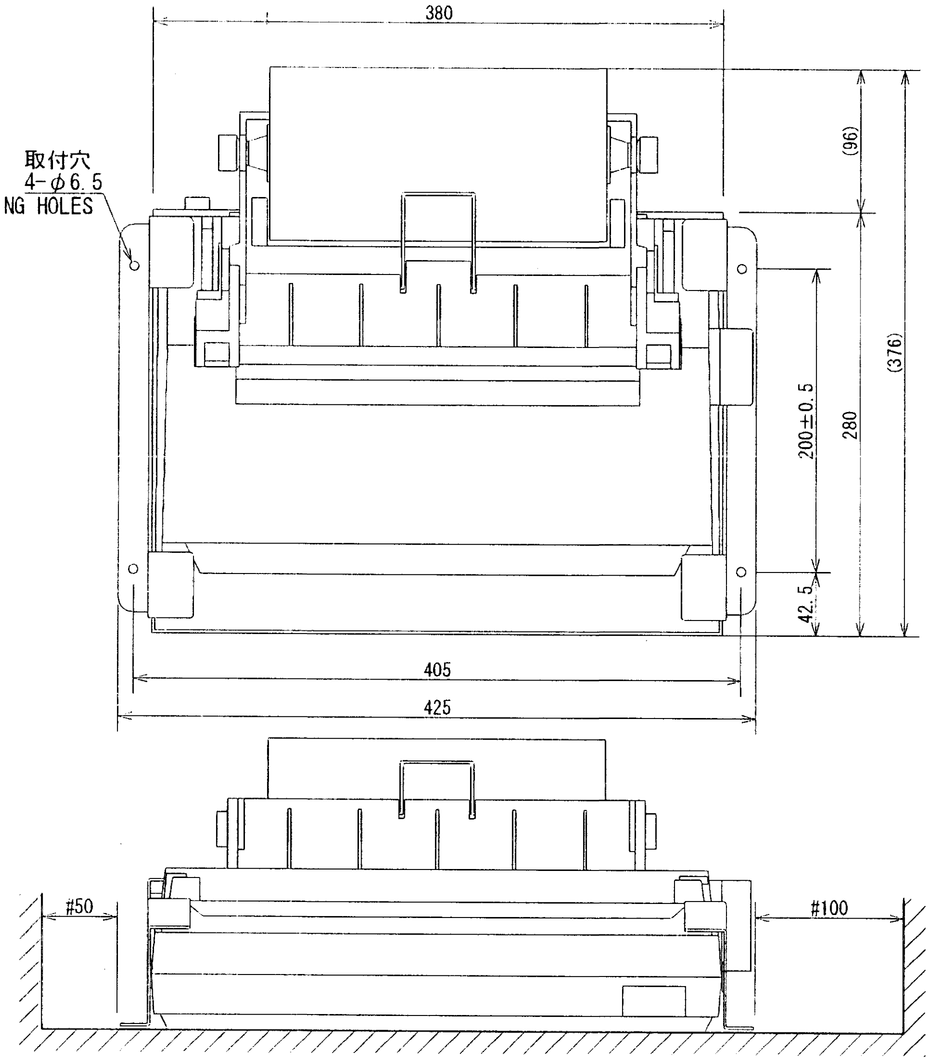
NOTE

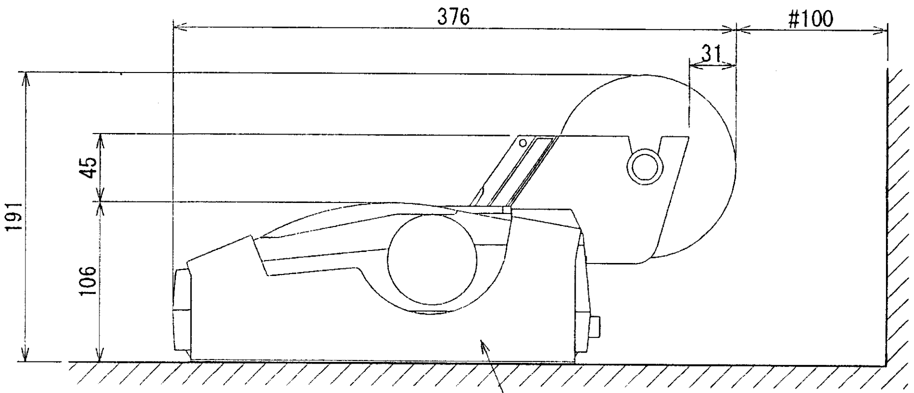
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.

DRAWN May 23 '01 T. YAMASAKI		TITLE	SEM-21Q
CHECKED May 24 '01 T. Kimura		名称	スピーカ
APPROVED May 24 '01 Y. Kimura			外寸図
SCALE 1/2	MASS ±10% 0.54 kg 質量は2.8mケーブルを含む MASS W/ 2.8m CABLE	NAME	LOUDSPEAKER
DWG. No. C5016-G07- A			OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO





寸法区分 (mm) DIMENSION	公差 (mm) TOLERANCE
0 < L ≦ 50	±1．5
50 < L ≦ 100	±2．5
100 < L ≦ 500	±3

表 1
TABLE 1

注　記　1） #印寸法は最小サービス空間寸法とする。
2） 指定外の寸法公差は表1による。
3） 取付用ネジはM6ボルトまたはコーチボルト呼び径6を使用のこと。

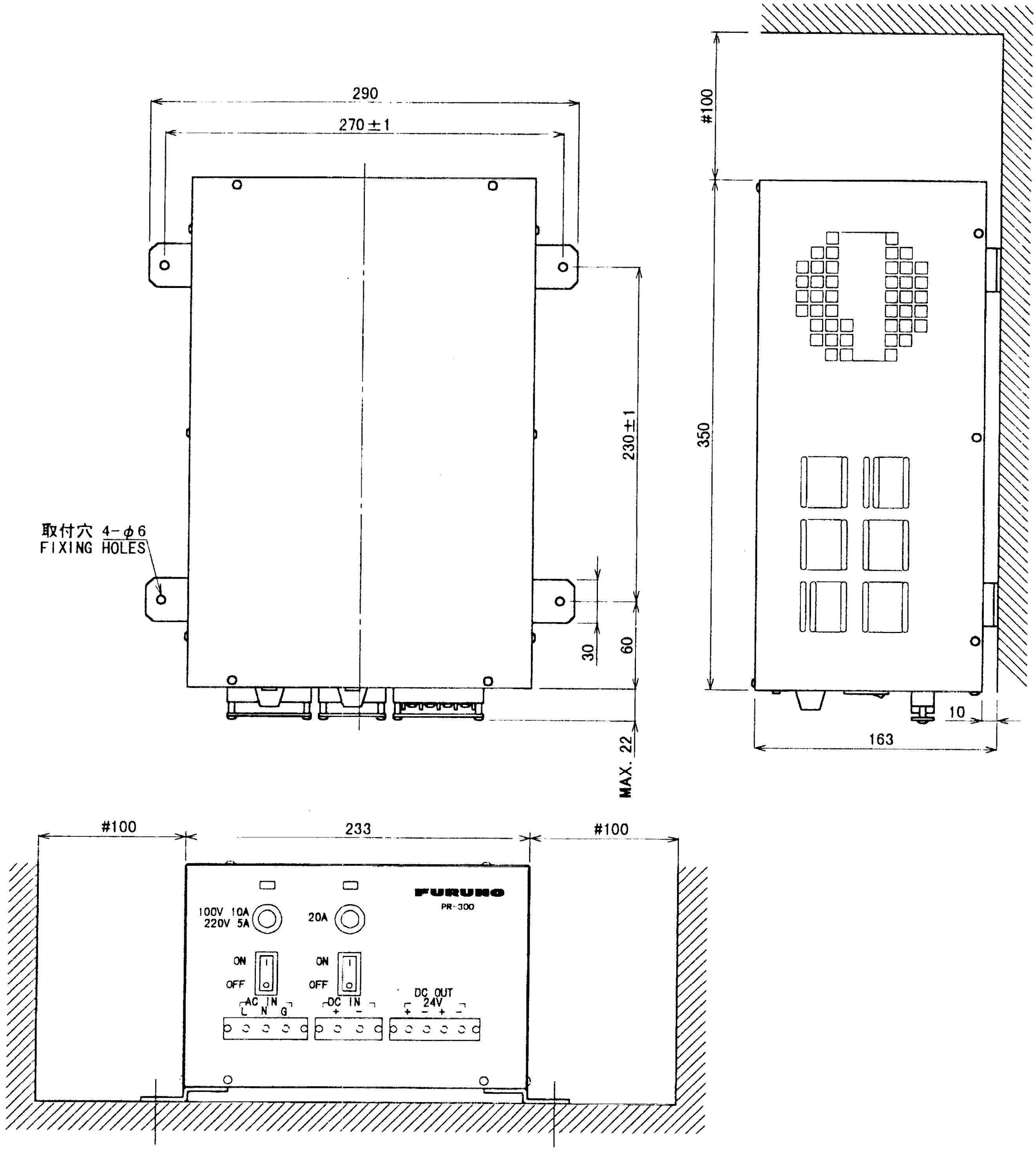
NOTE
1. #: RECOMMENDED SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.
3. USE M6 BOLTS OR COACH BOLTS φ6 FOR FIXING UNIT.

DRAWN July 26 '00 T.YAMASAKI		TITLE	PP-510
CHECKED July 27 '00 Y.Kimi		名称	プリンタ
APPROVED July 27 '00 Y.Kimi			外寸図
SCALE 1/5	MASS 3.8 ±10% kg	NAME	PRINTER
DWG. No. C5589-G08- H	16-007-660G- 2		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

1 2 3

A B C D



注記

1）#：推奨する最小サービス空間寸法。

2）指定なき寸法公差は表１による。

NOTE:

1. #: RECOMMENDED SERVICE CLEARANCE.

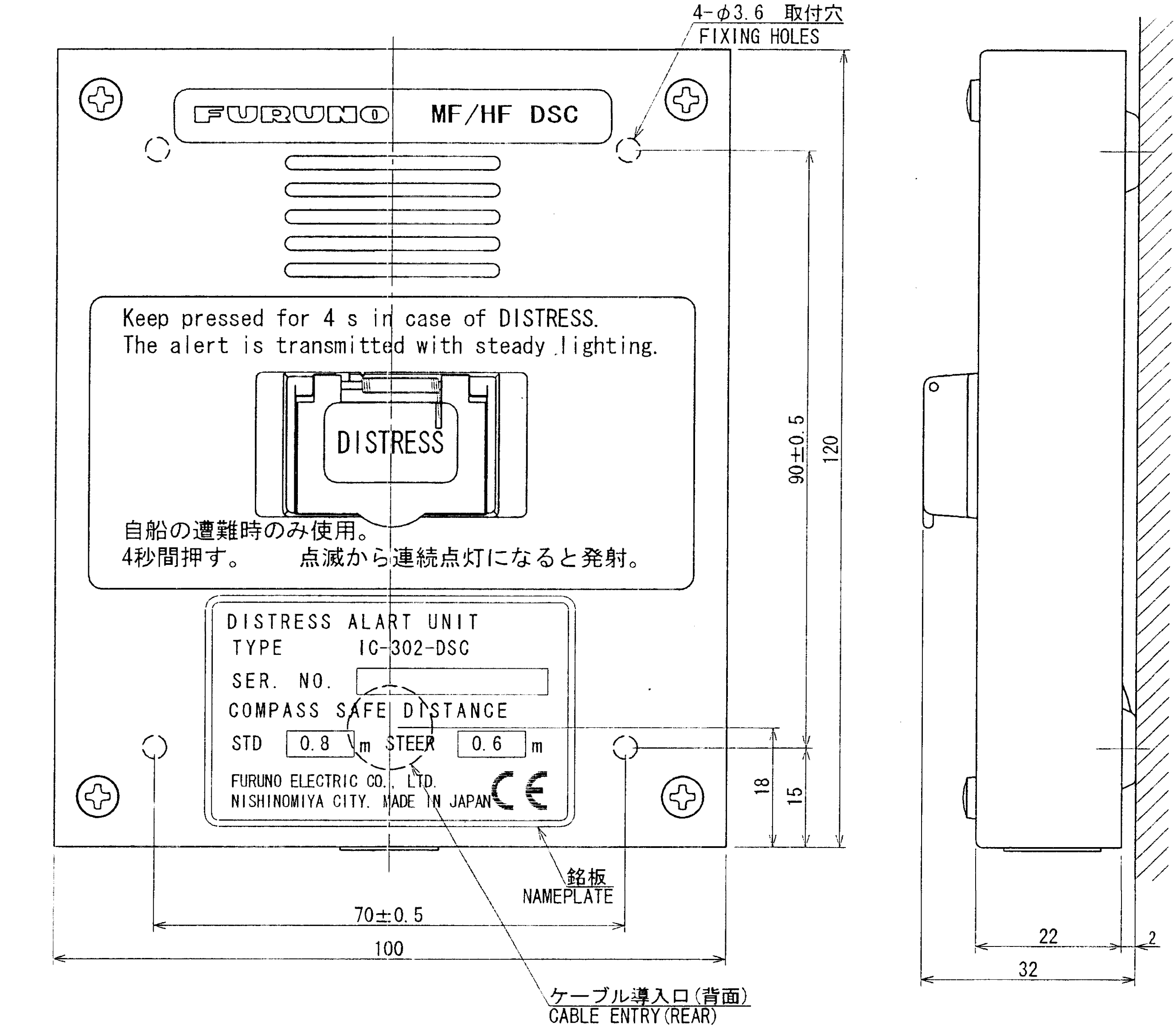
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.

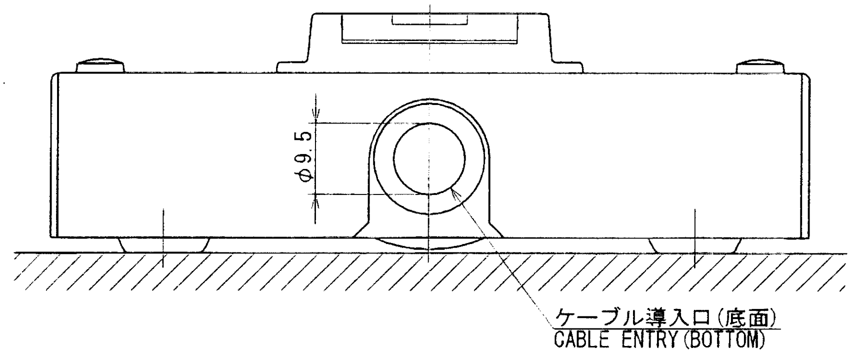
表1 TABLE 1

寸法範囲 (mm) DIMENSION	公差 (mm) TOLERANCE
0 < L ≦ 50	±1.5 mm
50 < L ≦ 100	±2.5 mm
100 < L ≦ 500	±3 mm

DRAWN	June. 19 '00 T. YAMASAKI
CHECKED	June 19 '00 Y. Kim
APPROVED	June 19 '00 Y. Kim
SCALE	1/4
MASS ±10%	14.5 kg
DWG. No.	C5003-G02- D
TITLE	PR-300
名称	AC-DC電源ユニット
	外寸図
NAME	AC-DC POWER SUPPLY UNIT
	OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.





注記 1）指定外寸法公差は表1による

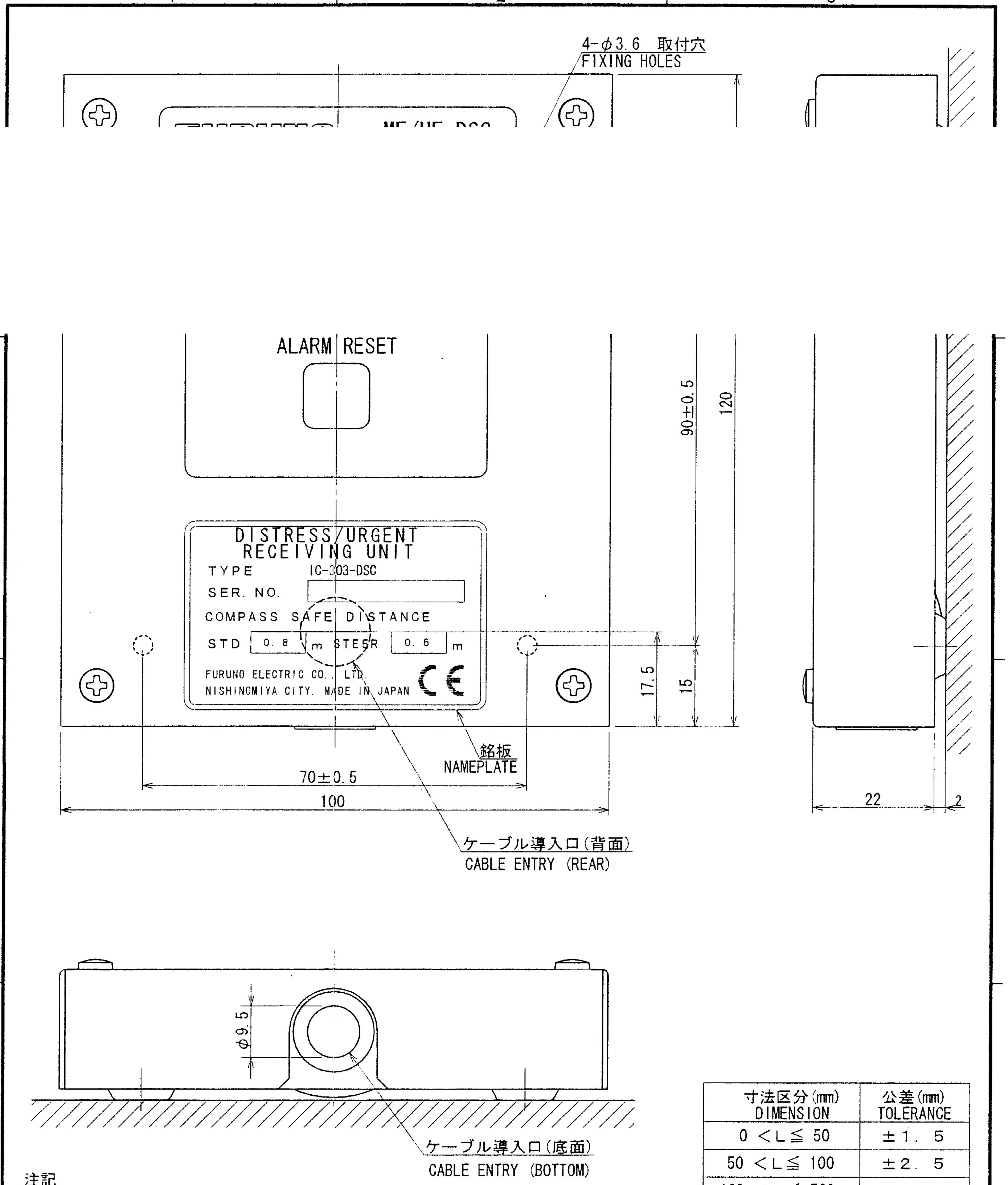
NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.

寸法区分(mm) DIMENSION	公差(mm) TOLERANCE
0 ＜L≦ 50	±1.5
50 ＜L≦ 100	±2.5
100 ＜L≦ 500	±3

表 1
TABLE 1

DRAWN Aug 30 '00 T.YAMASAKI		TITLE IC-302-DSC
CHECKED Aug 30 '00 Y.Kim		名称 遭難警報発呼器
APPROVED Aug 30 '00 Y.Kim	DSC-60	外寸図
SCALE 1/1	MASS 0.33 kg ±10%	NAME DISTRESS ALART UNIT
DWG.No. C5628-G02- B	16-013-3110-G2	OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.



注記
1）指定なき寸法公差は表１による。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.

寸法区分(mm) DIMENSION	公差(mm) TOLERANCE
0 ＜L≦ 50	±1．5
50 ＜L≦ 100	±2．5
100 ＜L≦ 500	±3

表 1
TABLE 1

DRAWN Aug 30 '00 T.YAMASAKI		TITLE	IC-303-DSC
CHECKED Aug 30 '00 T.Kim		名称	着信指示器（遭難警報用）
APPROVED Aug 30 '00 T.Kim	DSC-60		外 寸 図
SCALE 1/1 ; MASS 0.33 kg ±10%		NAME	DISTRESS/URGENT RECEIVING UNIT
DWG. No. C5628-G03- B	16-013-3120-G2		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

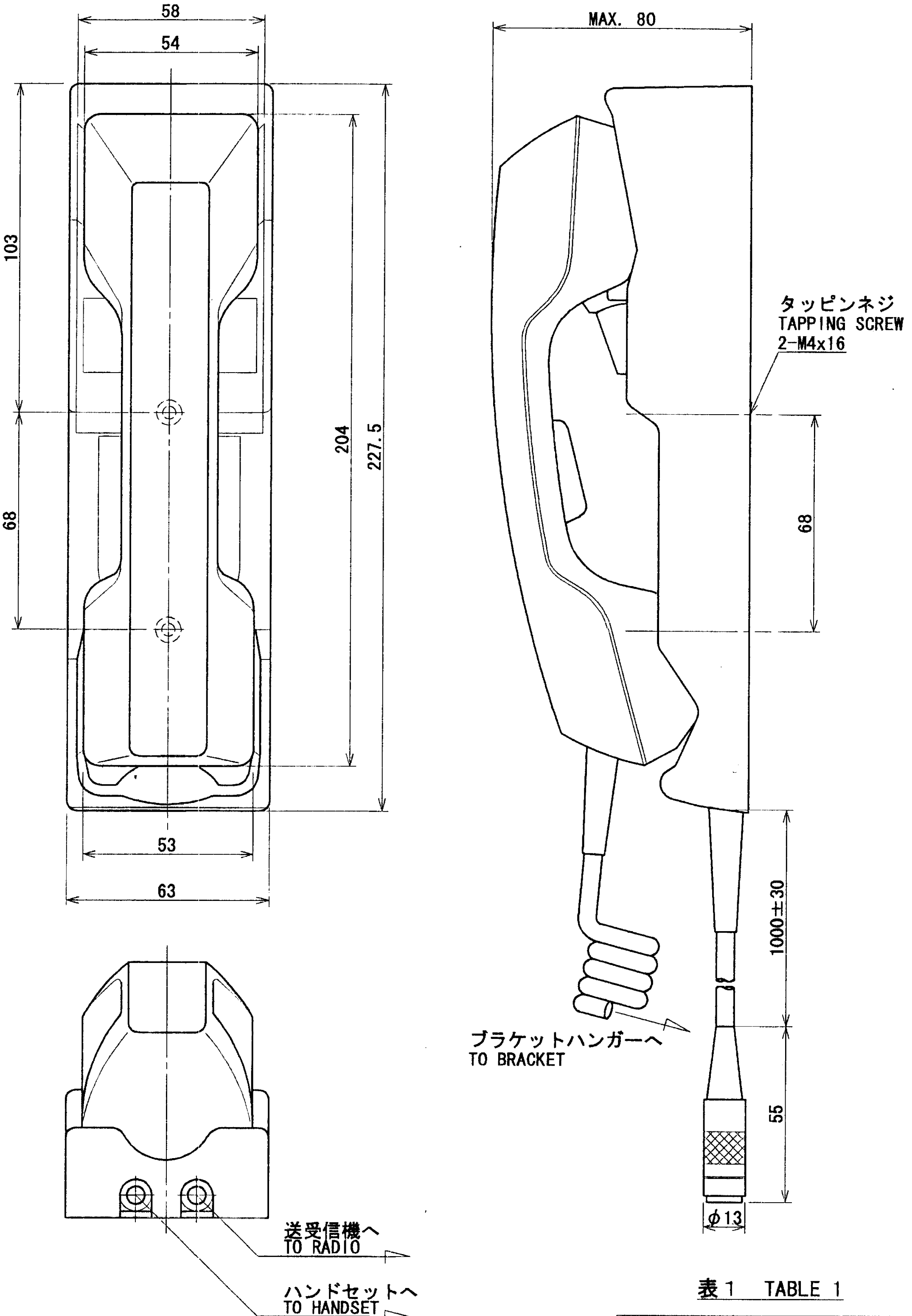


表１　TABLE 1

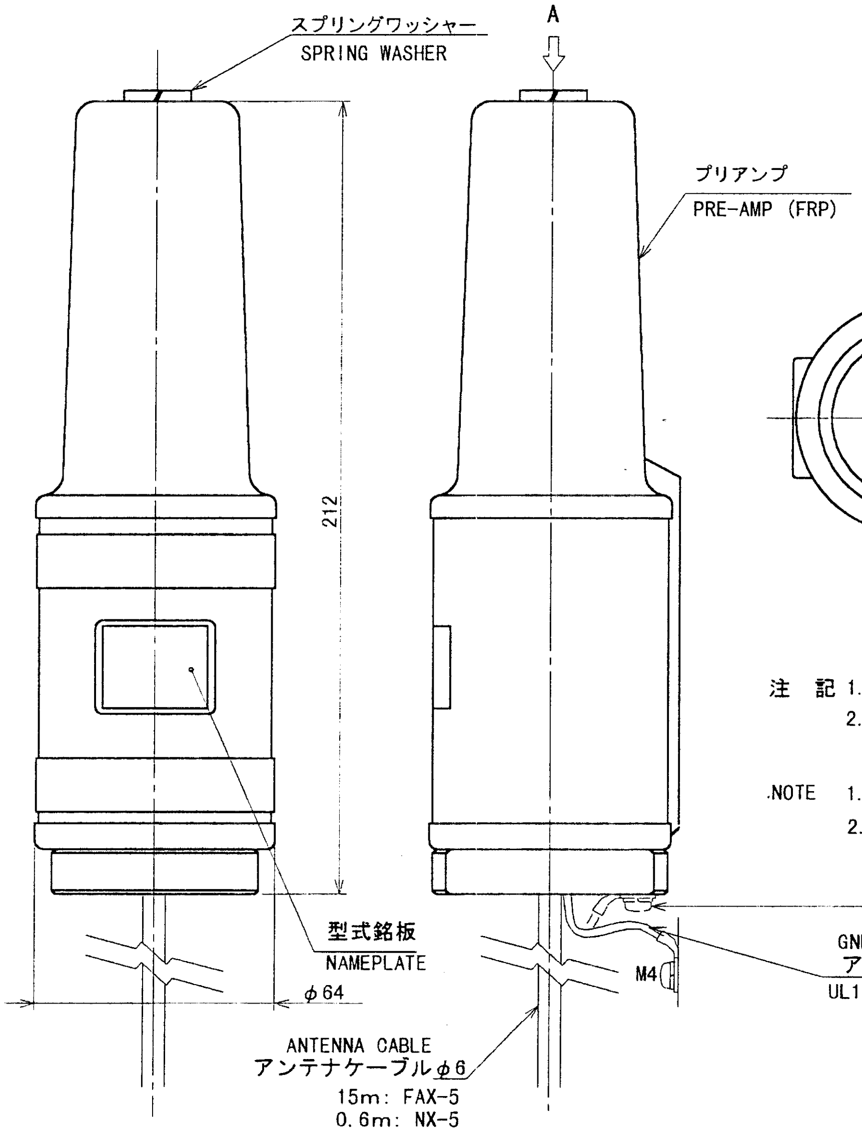
寸法区分(mm) DIMENSION	公差(mm) TOLERANCE
0 ＜ L ≦ 50	±1.5
50 ＜ L ≦ 100	±2.5
100 ＜ L ≦ 500	±3

注記
1）指定なき寸法公差は表１による。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.

DRAWN: Nov16'99 T.YAMASAKI	TITLE: HSC701K-B20
CHECKED: Nov16'99 K.Kusunoki	名称: ハンドセット（ブラケット付）
APPROVED: Nov16'99 K.Kusunoki	外寸図
SCALE: 1/2 — MASS: 0.65 kg ±10%	NAME: HANDSET W/ BLACKET
DWG. No.: C5603-G06- D	OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

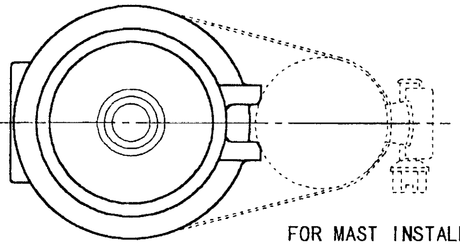


工場出荷時
FACTORY SETTING

GND WIRE
アース線*2
UL1571, 0.3m

表 1 TABLE 1

範　囲 DIMENSION	公 差 TOL.
L≦50	±1mm
50<L≦100	±2mm
100<L≦500	±3mm
500<L≦1000	±4mm
1000<L≦2000	±5mm



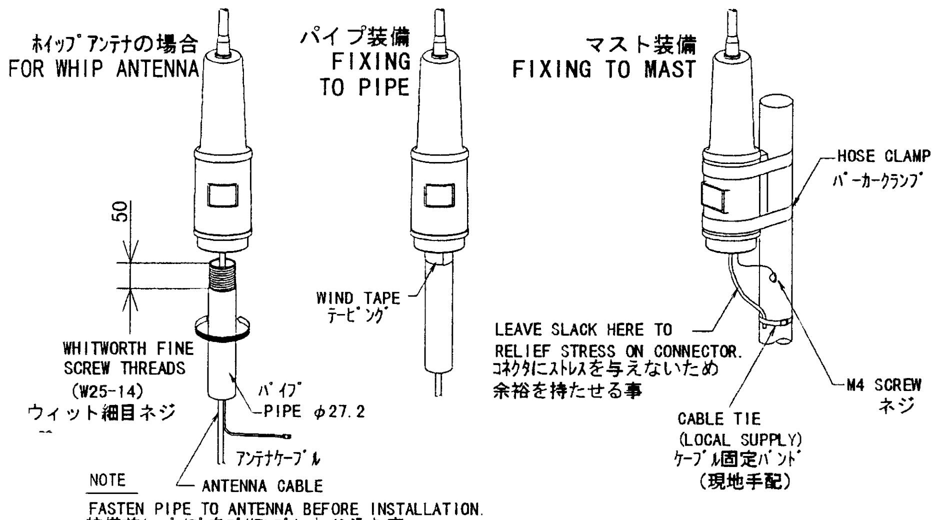
FOR MAST INSTALLATION
マスト装備時

矢視 A
VIEW A

注　記 1. 指定外の寸法公差は表１を参照
2. アンテナマストに接続

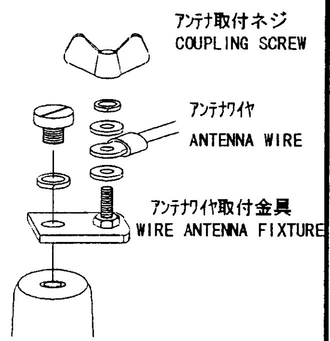
NOTE 1. TABLE 1 SHOWS TOLERANCE OF DIMENSIONS.
2. CONNECT THIS WIRE TO ANTENNA MAST TO REDUCE NOISE.

マストへの取付　MAST MOUNTING



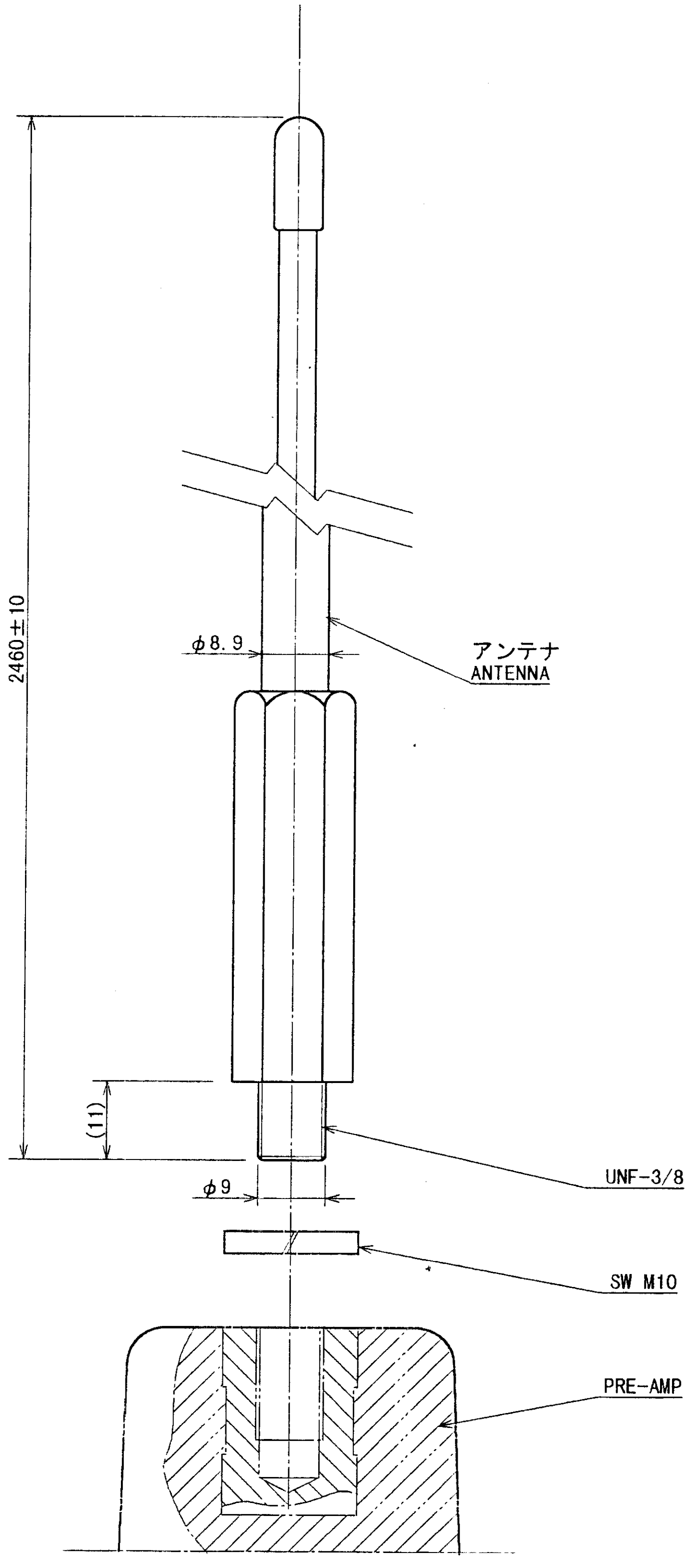
NOTE
FASTEN PIPE TO ANTENNA BEFORE INSTALLATION.
装備前にﾊﾟｲﾌﾟをﾌﾟﾘｱﾝﾌﾟにねじ込む事。

ﾜｲﾔｱﾝﾃﾅの場合
FOR WIRE ANTENNA



DRAWN June 26 '00 T.YAMASAKI		TITLE	FAX-5/NX-5
CHECKED June 26 '00 T.Kim		名称	プリアンプ
APPROVED June 26 '00 T.Kim			外寸図
SCALE 1/2	MASS 0.6 kg (本体のみ) MASS W/O CABLE.	NAME	PRE-AMP UNIT
DWG. No. C6244-003-J			OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

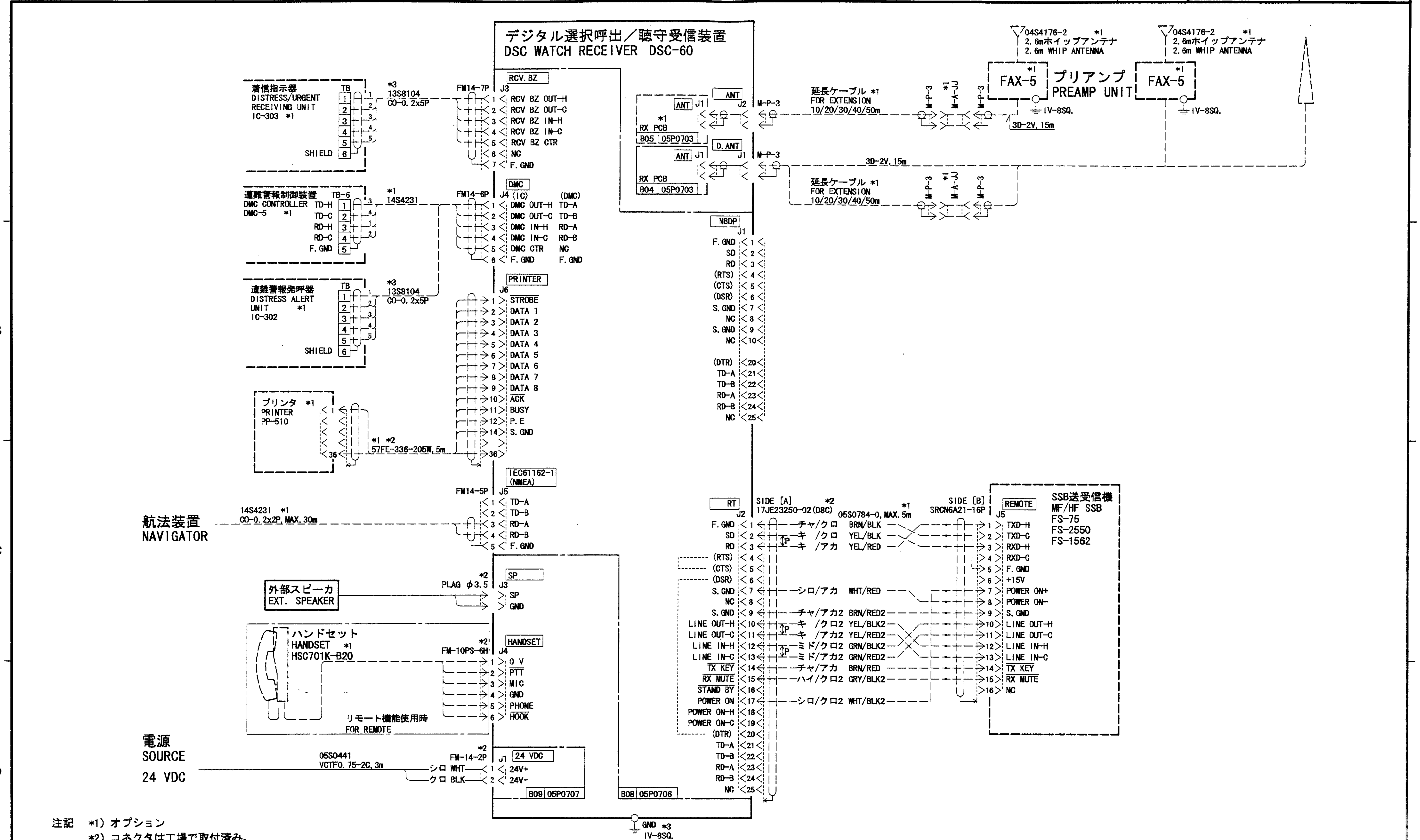


DRAWN June 27 '00 T.YAMASAKI		TITLE	04S4176-1
CHECKED June 27 '00 Y.Kim		名称	2.6m ホイップアンテナ
APPROVED June 27 '00 Y.Kim			外寸図
SCALE 1/1	MASS 0.5 kg	NAME	2.6m WHIP ANTENNA
DWG. No. C4002-018-F			OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO

S－1



注記 *1) オプション
*2) コネクタは工場で取付済み。
*3) 造船所手配。

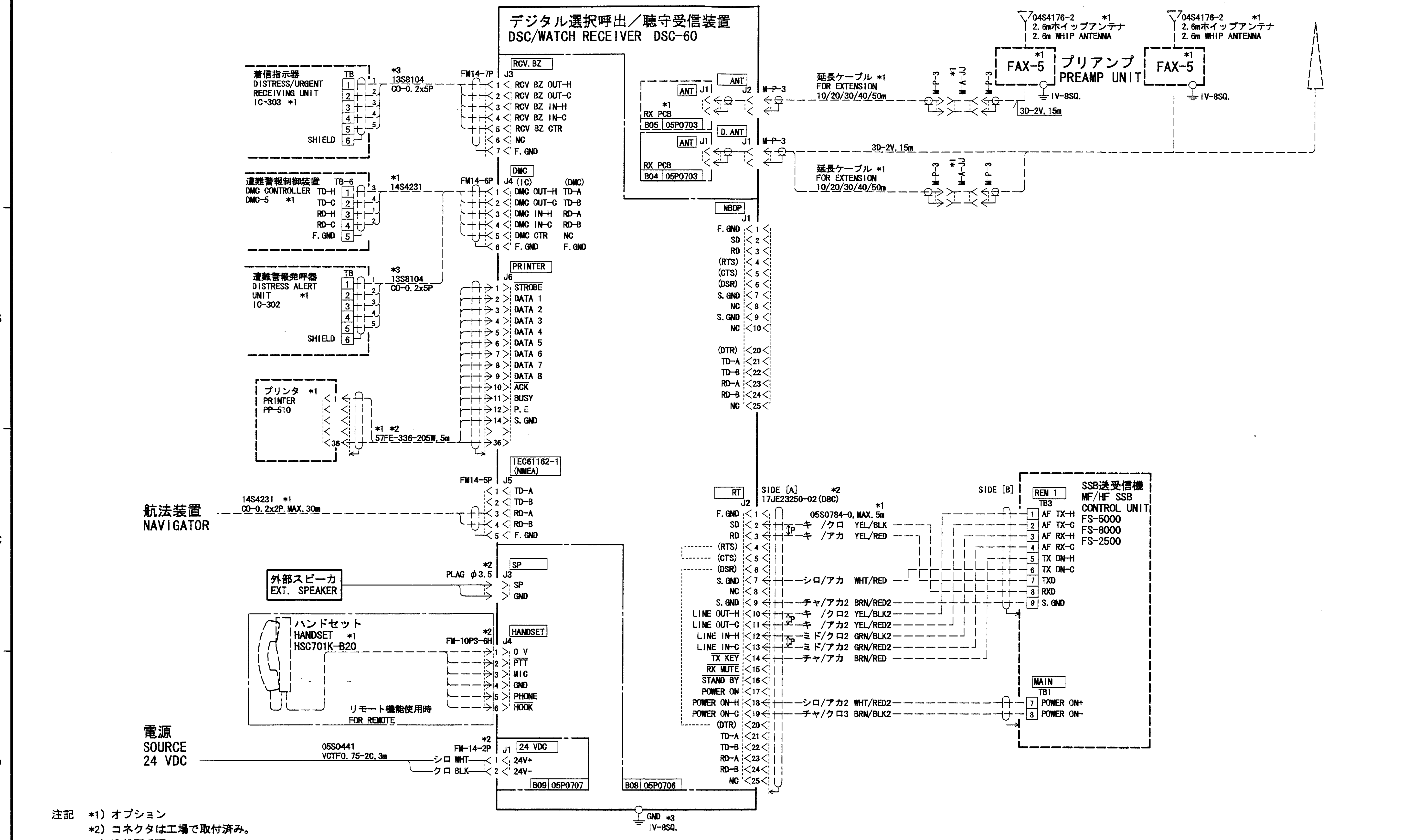
NOTE *1. OPTION
*2. CONNECTOR PLUGS FITTED AT FACTORY.
*3. SHIPYARD SUPPLY.

CO-0.2x2P: CO-SPEVV-SB-C 0.2x2P, φ10.5
CO-0.2x5P: CO-SPEVV-SB-C 0.2x5P, φ13.5

DRAWN May 28 '01	T. YAMASAKI	TITLE	DSC-60
CHECKED May 30 '01 Y. K.		名 称	デジタル選択呼出／聴守受信装置
APPROVED May 30 '01 Y. K.			相互結線図
SCALE	MASS kg	NAME	DSC/WATCH RECEIVER
DWG No.	C5628-C01- C		INTERCONNECTION DIAGRAM

FURUNO ELECTRIC CO., LTD.

S-1A



注記 *1) オプション
*2) コネクタは工場で取付済み。
*3) 造船所手配。

NOTE *1. OPTION
*2. CONNECTOR PLUGS FITTED AT FACTORY.
*3. SHIPYARD SUPPLY.

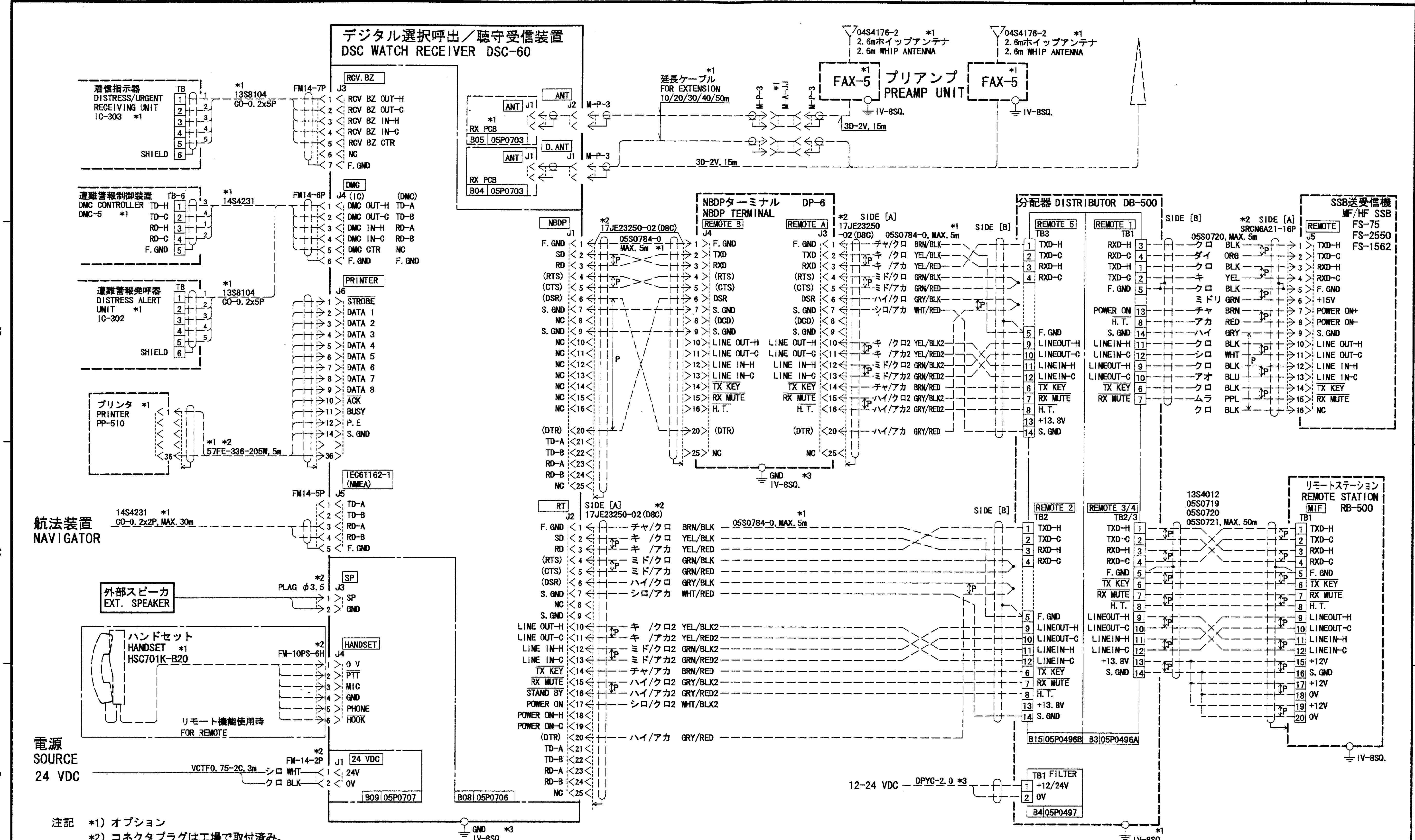
CO-0.2x2P: CO-SPEVV-SB-C 0.2x2P, φ10.5
CO-0.2x5P: CO-SPEVV-SB-C 0.2x5P, φ13.5

DRAWN May 28 '01	T.YAMASAKI	TITLE	DSC-60 (FS-5000/8000)
CHECKED May 30 '01 Y.K.		名 称	デジタル選択呼出／聴守受信装置
APPROVED May 30 '01 Y.K.			相互結線図
SCALE	MASS kg	NAME	DSC/WATCH RECEIVER
DWG No.	C5628-C05- B		INTERCONNECTION DIAGRAM

FURUNO ELECTRIC CO., LTD.

FURUNO

S－2



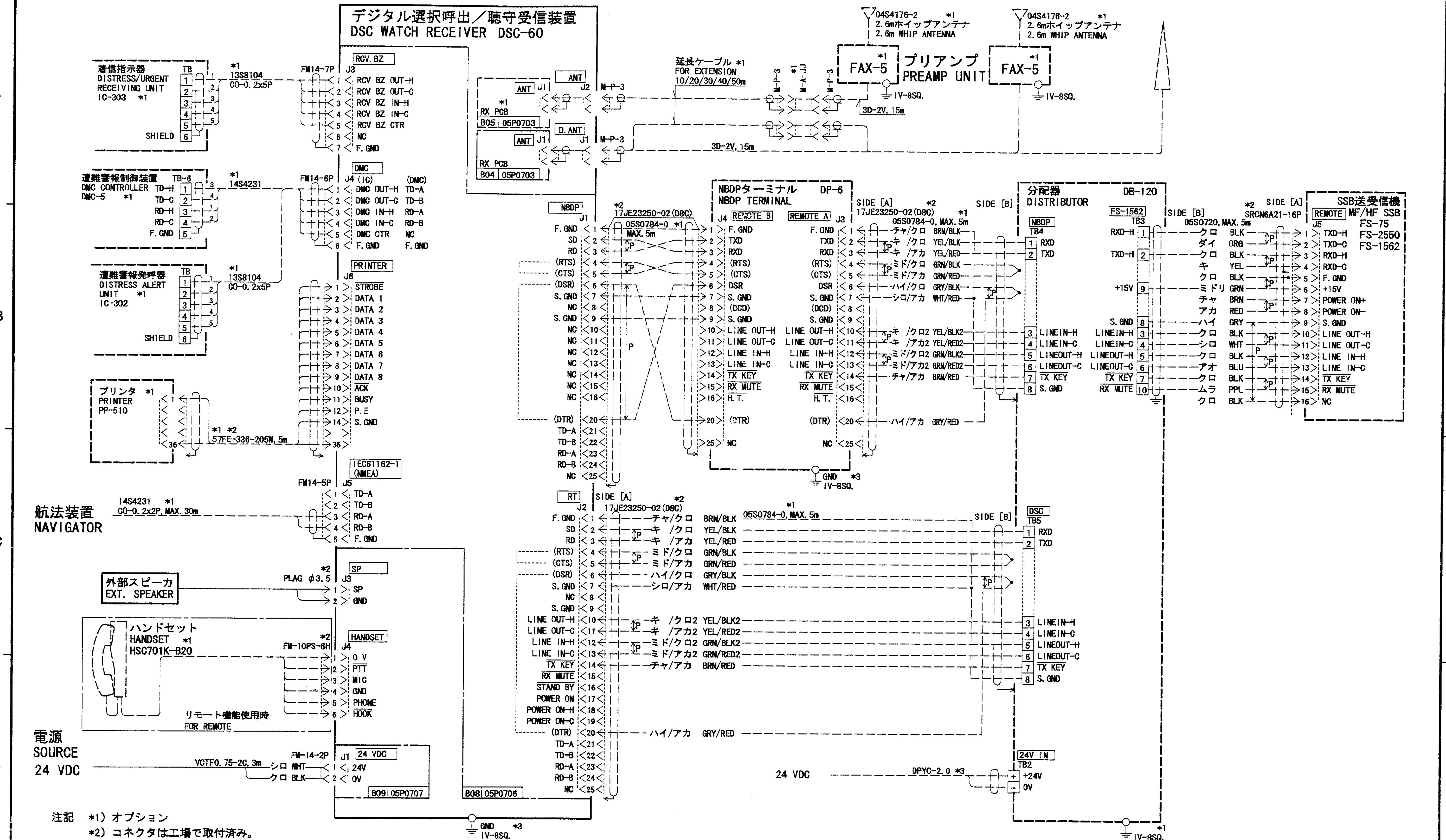
注記 *1) オプション
*2) コネクタプラグは工場で取付済み。
*3) 造船所手配。

NOTE *1. OPTION
*2. CONNECTOR PLAG IS FITTED AT FACTORY.
*3. SHIPYARD SUPPLY.

CO-0.2x2P: CO-SPEVV-SB-C 0.2x2P, φ10.5
CO-0.2x5P: CO-SPEVV-SB-C 0.2x5P, φ13.5

DRAWN May 28 '01	T.YAMASAKI	TITLE	DSC-60
CHECKED May 30 '01 Y.Kai		名称	デジタル選択呼出／聴守受信装置
APPROVED May 30 '01 Y.K			相互結線図
SCALE	MASS kg	NAME	DSC/WATCH RECEIVER
DWG No.	C5628-C02- B		INTERCONNECTION DIAGRAM

FURUNO ELECTRIC CO., LTD.



注記　*1）オプション

*2）コネクタは工場で取付済み。

*3）造船所手配。

NOTE　*1. OPTION

*2. CONNECTOR PLUGS FITTED AT FACTORY.

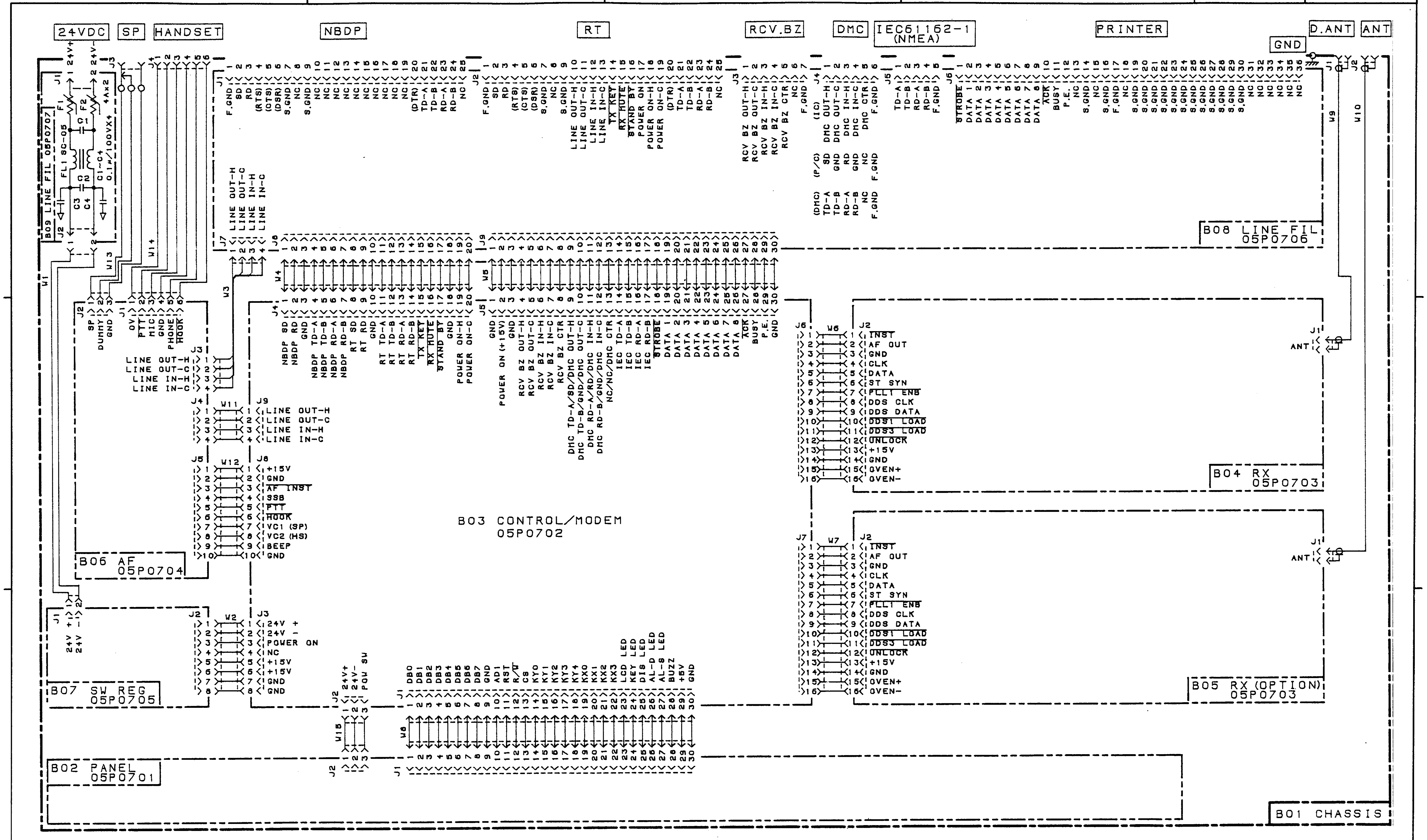
*3. SHIPYARD SUPPLY.

CO-0.2x2P: CO-SPEVV-SB-C 0.2x2P, φ10.5

CO-0.2x5P: CO-SPEVV-SB-C 0.2x5P, φ13.5

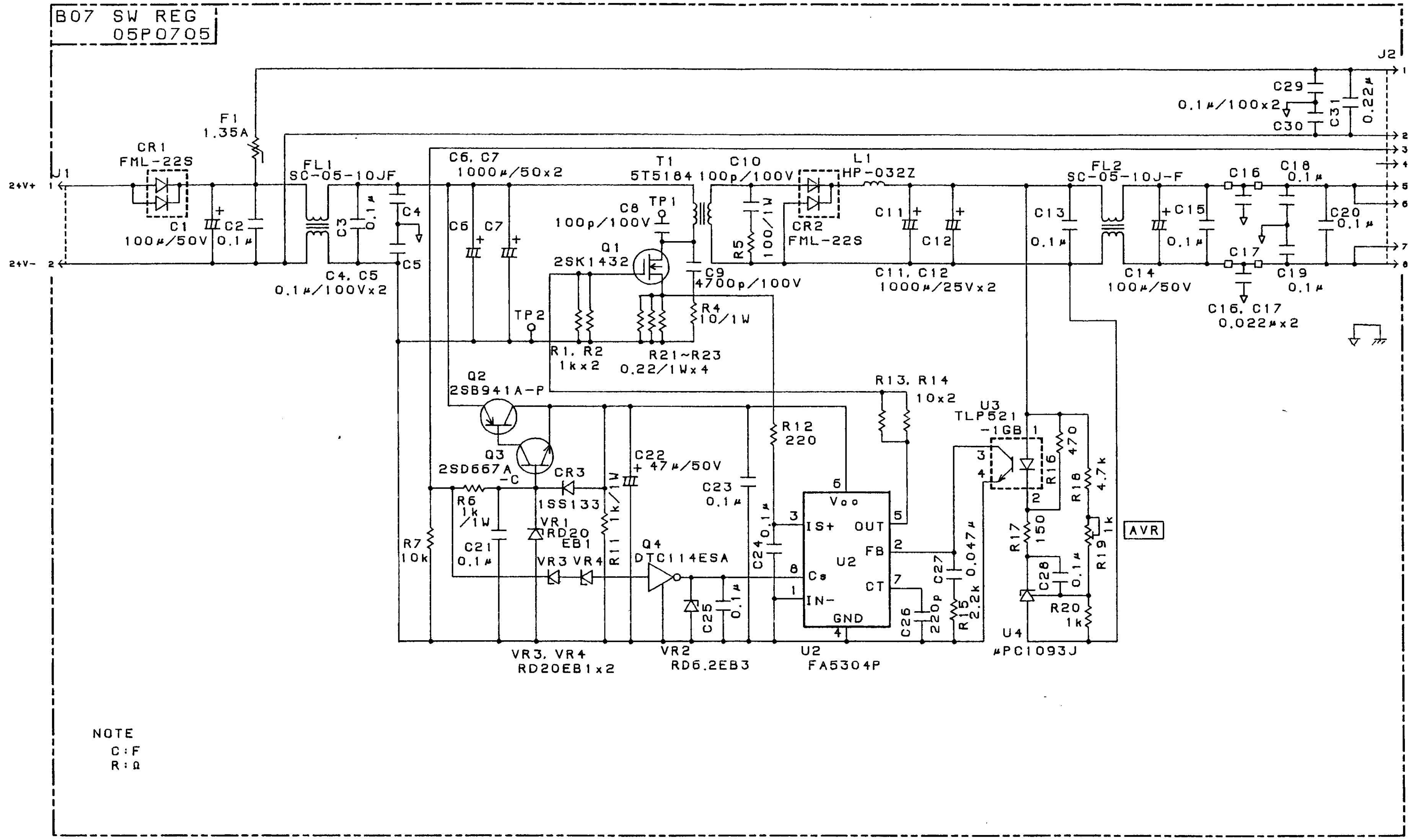
DRAWN May 28 '01	T. YAMASAKI	TITLE	DSC-60
CHECKED	May 28 '01 Y. Kim	名 称	デジタル選択呼出／聴守受信装置
APPROVED	May 28 '01 Y. Kim		相互結線図
SCALE	MASS kg	NAME	DSC/WATCH RECEIVER
DWG No.	C5628-C03- C		INTERCONNECTION DIAGRAM

FURUNO ELECTRIC CO., LTD.



DRAWN Oct.21'99 T.YAMASAKI		TYPE	DSC-60
CHECKED Oct.21'99 K.Kusunoki		名称	デジタル選択呼出／聴守受信装置（総合） 回路図
APPROVED Oct.21'99 K.Kusunoki			
SCALE / MASS kg	APPLICABLE TO: (MODEL) / BLOCK NO.	NAME	DSC/WATCH RECEIVER SCHEMATIC DIAGRAM
DWG NO. C5628-K01- B	05-001-3814- 0		

FURUNO ELECTRIC CO., LTD.



NOTE
C:F
R:Ω

DRAWN Sep 28 '99 T.YAMASAKI			TYPE 05P0705
CHECKED Sep 28 '99 K.Kusunoki			名称 電源部
APPROVED Sep 28 '99 K.Kusunoki	DSC-60	B 7	回路図
SCALE / MASS kg	APPLICABLE TO; (MODEL)	BLOCK NO.	NAME SW REG PCB
DWG NO. C5628-K02- A	05-001-3818- 0		SCHEMATIC DIAGRAM

FURUNO ELECTRIC CO., LTD.